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No. 1338

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/Article: "An Immutable Law of a Farmer"/

/Excerpts/ Never before has our mountainous kray experienced such warm spring conditions such as have occurred this year. There was no rainfall either in April or May. The wheat, barley and oats became blighted and turned yellow on non-irrigated land. The grasses in the foothills became scorched. Moreover, success was not achieved in all areas with regard to obtaining cotton and sugar beet seedlings on irrigated lands.

The sowings of grain, forage and other crops and the natural pasture and haying lands sustained irreparable damage in a number of areas. And if measures are not undertaken at the present time aimed at countering the drought conditions through improved organization and selfless labor, shortfalls in many types of agricultural products are apt to occur. And this cannot be allowed to happen. The Central Committee of the Communist Party of Kirghizia has addressed a letter to all of the communists and komsomols, to all farmers and livestock breeders and to the industrial enterprises, institutes and organizations providing support for agriculture, asking them to display a high level of conscientiousness, industry, genuine concern and zealousness for obtaining maximum yields for their grain, forage and other crops from each irrigated hectare. In order to carry out the socialist obligations undertaken for this present jubilee year, each kolkhoz and sovkhoz must determine the means to be employed for compensating for the expected shortfall in yields from the non-irrigated tracts of land. The best method for accomplishing this -- expanding the areas to be used for grain corn and raising the cropping power of grain crops on irrigated lands.

The workers at factories and plants and the office workers of institutes and organizations have joined in the national campaign to overcome the drought conditions.

This is not the first time that the workers in our republic have encountered severe weather conditions. Such unfavorable years have occurred several times in recent years. The farmers have accumulated considerable experience in overcoming the drought conditions and on more than one occasion they have emerged victorious in the campaign against these conditions. Each time they were aided by their irrigated lands, the area of which has undergone considerable expansion following

the May (1966) Plenum of the CC CPSU, during which an extensive program for land reclamation was developed.

The correct utilization of each hectare of land and the thrifty expenditure of irrigation water -- these are decisive conditions for obtaining high yields. These are precisely the methods being employed on a majority of the kolkhozes and sovkhozes in Bazar-Kurganskiy Rayon. Here each liter of irrigation water is accounted for, it is skilfully and efficiently distributed among the farms and even the slightest problems arising in connection with its use are being corrected. Irrigation of the crops is being carried out around-the-clock, with the water being delivered to the fields in a light stream via reinforced furrows.

Unfortunately, the water is not being used in a thrifty manner in all areas, nor is the irrigation work being carried out in a high quality manner. Inspections have revealed that on some farms in Moscow, Alamedinskiy and Issyk-Atinskiy Rayons the water is spilling over onto roads and thus it is being wasted. There have been many instances of the use of water not being supervised at night. It washes away the seedlings and exposes the roots of the plants. Inspections are often carried out in Kara-Suyskiy Rayon and yet only minor improvements are being achieved.

With each passing year, such laborious work as the irrigation of crops is becoming more and more mechanized. In particular, the pool of sprinkling machines, Fregats and Volzhankas is expanding rapidly and the number of pumping stations increasing. In addition to reducing the expenditures of manual labor, the use of this equipment is also making it possible to realize economies in the use of irrigation water. Workers at the Druzhba Kolkhoz in Sokulukskiy Rayon have become convinced of this fact based upon practical experience. Owing to the existing shortage in irrigation water, they rejected manual control and they are irrigating their crops around-the-clock using sprinkling machines.

But high yields can be obtained only on the basis of timely and high quality irrigation of the crops coupled with retaining the moisture in the soil -- preventing it from evaporating rapidly. An immutable law of the farmers consists of combining irrigation work with cultivations and maintaining the inter-row spacings in a damp and loose condition. Meanwhile, the inter-row tilling of industrial sugar beet and corn plantings is being carried out late on a number of farms in Chuyskiy Rayon. Nevertheless the specialists of raysel'khozupravleniye are not carrying out this important agrotechnical measure in a timely manner and in the final analysis this is bringing about an increase in the expenditure of irrigation water.

Water is tantamount to a harvest. Timely waterings and inter-row cultivations -- these are effective agrotechnical measures for achieving the intensive development of crops. The communists and komsomols, agricultural workers and all workers throughout the republic must devote a maximum amount of effort towards alleviating the harmful effects of the drought conditions by achieving new labor successes and accomplishing good work in behalf of the glorious jubilee -- the 60th anniversary of the formation of the USSR.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

UZBEKISTAN CONCERN FOR GRAIN CORN EXPRESSED

Moscow SEL'SKAYA ZHIZN' in Russian 16 May 82 p 1

/Article by B. Allamuradov, 1st secretary of the Central Committee of the Lenin Young Communist League of Uzbekistan/

/Excerpts/ In addition to cotton, a most important concern of the komsolols and youth of Uzbekistan is that of achieving a sharp increase in the production of grain corn. This year it has been sown on 300,000 hectares, or 88,000 more hectares than last season. Specialized farms responsible for the production of seed have been created for the very first time. For the very first time also, this crop is being cultivated on the principal areas using an industrial technology. In addition, for the very first time the plans call for 2 million tons of grain corn to be obtained.

Measures are presently being undertaken to improve this work.

The party organizations have required the farm leaders and specialists to grow corn only on the fields of a crop rotation plan, only on large tracts and to allocate for its cultivation adequate quantities of fertilizer, mechanisms, protective agents and water.

The campaign which has commenced throughout the republic for converting over to concentrated grain corn production is not limited to the creation of the initial group of specialized sovkhozes. This process will be continued and by the end of this current five-year period the plans call for the production of grain corn to be doubled. However, serious preparations must be made for this. The republic's komsomol must increase the number of schools and courses for young corn growers. Great opportunities are becoming available in this regard owing to the initiative displayed by Omsk 10th grade students, who expressed a desire on the part of entire classes to transfer over to work in livestock production. The corn fields are also associated with livestock production.

The conversion of the branch over to an industrial basis also requires urgent solutions for a number of other problems. Included among them is the quality of the harvesting equipment. A corn crop is presently being harvested by a Khersonets-7 combine, which cannot handle large leaf and stalk bulk. True, the Khersonets-200 machine appeared last year and yet it too is experiencing difficulty in handling our generous yields. Moreover, the new machines were developed for 70 centimeter inter-row spacings, despite the fact that on large areas use is being made of a system adopted for cotton -- with 90 centimeter inter-row spacings.

Herbicides of selective action are required for cultivating the crops, herbicides which will not interfere with the principal crop -- cotton.

Plant breeding and seed production are in need of radical improvements. In connection with a sharp increase in the gross yield of grain corn, greater importance is now being attached to the problem of creating a modern complex for the acceptance, storage and processing of the final product. As yet there is only one small corn grading plant in operation in the republic. And the construction of such an enterprise in Dzhalalkudukskiy Rayon in Andizhanskaya Oblast has clearly fallen behind. The republic's Komsomol has resolved to provide support for this project and to place it in operation in the near future.

Uzbekistan is the country's largest cotton production region. At the present time, corn is being ranked at the same level as cotton. It is a matter of high honor for the Komsomol to display concern for the corn fields.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

AID FOR BACKWARD BEET GROWING TEAMS IN VORONEZHSKAYA OBLAST

Moscow TRUD in Russian 16 May 82 p 1

/Article by V. Filin, Voronezh: "On a Par With the Leaders"/

/Text/ The Voronezh beet growing fields are the largest in the Russian Federation. This year they occupy 207,000 hectares. The sweet roots grown by the workers in Voronezhskaya Oblast are used for producing one out of every four tons of sugar in the country.

At the present time, the sowing of this valuable technical crop is nearing completion throughout the oblast. This work is being carried out as rapidly as possible so as to guarantee a reliable harvest.

By no means possessing the richest soil in Talovskiy Rayon (the average number of points is just slightly higher than sixty), the Kolkhoz imeni Kalinin has the reputation of being one of the best not only in the Kamennaya Steppe region but also throughout the entire oblast. Even during last year, an extremely dry one, an average of more than 220 quintals was obtained here from each of 700 hectares. And on some tracts where N. Korolev, a recipient of the State Prize of the USSR and leader of a mechanized team, was working, the yield of sweet roots rose to 300 quintals per hectare.

The difference in the figures once again proves that the Voronezh fields can produce beet yields in excess of 300 quintals per hectare.

This same opinion is held by the chief technologist for beet plantations and Hero of Socialist Labor A. Galkin at the Maslovskiy Sovkhoz in Novousmanskiy Rayon.

"It is gratifying to note that more and more use is being made of the progressive industrial technology for the growing of beets throughout the oblast, with only minimal expenditures of manual labor" stated Aleksandr Mikhaylovich, "We were the first. But now entire rayons are employing the new method."

In the Kamennaya Steppe region alone, hoes have been retired from use completely on almost one third of the plantings.

"Great importance is being attached here" stated the chairman of the oblast's professional trade union committee for agricultural workers S. Kharlamov, "to raising backward farms to the level of leading ones. The efforts of the

professional trade union committees are presently being directed towards achieving this goal.

A fine undertaking has been launched during this current busy spring period -- collective tutorship among the machine operator-beet growers. The leaders of two beet growing teams provide an example of the essence of this undertaking -- Hero of Socialist Labor A. Galkin and N. Usovichenko of the neighboring Put' K Kommunizmu Kolkhoz. During the last five-year plan, the collective of the former obtained an average yield of 270 quintals per hectare and at the Put' K Kommunizmu Kolkhoz the cropping power was only 115 quintals.

Thus Aleksandr Mikhaylovich Galkin seized the initiative and resolved to work in close collaboration with his neighbors.

"We do not wish to tow them along, but merely extend to them a helping hand" he stated.

The decision was made to summarize each technological operation on a regular basis: sowing, formation of the planting density, tending the crops, preparation of the equipment for harvesting and the harvesting work itself. The members of the teams had already commenced working with one another -- they are transmitting their own experience and borrowing the best experience from their neighbors.

This year there are approximately fifty such support elements operating among the beet growers throughout the oblast. It is believed that this collective tutorship in agriculture, which came into being in Voronezhskaya Oblast, will produce positive results in connection with further development of the agroindustrial complex.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

INCREASED SUGAR BEET PRODUCTION IN KRASNODARSKIY KRAY

Moscow PRAVDA in Russian 28 Apr 82 p 1

/Article by K. Aksenov, Krasnodarskiy Kray: "Aided By the Experience of Neighbors"/

> /Excerpts/ This year the Kuban' farmers resolved to sell 6 million tons of beets to the state. The plans call for 350 quintals of roots to be obtained from each hectare -- almost two times more than the amount obtained last year, a dry year. What accounts for this increase in cropping power? First of all, improvements were carried out in the production technology and efficient use has been made of the various agrotechnical methods. The competing Kanevskiy and Leningradskiy Rayons -- large-scale suppliers of the sweet roots -- have served as a type of school for leading experience.

"During the Tenth Five-Year Plan" stated the 1st secretary of the Kanevskiy Rayon Party Committee P. Chubov, "we increased the cropping power of the roots by almost 100 quintals. We were aided in this regard by the experience of our neighbors."

The rayon's beet plantations occupy 15,600 hectares. But earlier the cropping power was not always satisfactory. During the Ninth Five-Year Plan, for example, the beet production plan was not fulfilled; only 249 quintals per hectare were obtained -- 41 quintals less than the neighbors. Not wishing to continue to lag behind, the decision was made to master the experience of the neighbors. Fertility detachments were created. More than 10 tons of organic material are now being applied per hectare. In addition, agrochemical complexes were built on all of the farms during the course of 1 year's time. Liquid solutions are prepared here which subsequently are applied with the aid of re-equipped cultivators to the roots of the plants.

All of this had an effect on the final results. During the five-year plan, a hectare of land furnished an average of 345 quintals of roots. True, succes was not achieved in attempting to match the cropping power of their rivals in the comptition, but nevertheless the gap closed noticeably.

Thus the beet growers are working and generously sharing their experience. The competition is aiding them in successfully solving many problems associated with the organization of labor, improving the fertility of the land and introducing progressive agrotechnical methods. This year the weather produced a number of

surprises: the cold weather was prolonged and spring was late in arriving. But the teams carried out their sowing work without interruptions and the seed was planted in well tilled and fertilized soil. Healthy seedlings were obtained.

The beet production technology includes an operation which requires tremendous expenditures of manual labor. The scientists have proposed that 4-5 roots be left per linear meter and thus a machine can sow considerably more seed. A hoe must be employed for removing excess shoots. It has been estimated that the payment for this work alone exceeds 2 million rubles in two rayons.

And is it not possible to free the farmers from having to perform laborious work?

"It is possible" stated the specialists, "but first of all there is a requirement for single-shoot seed having a high germinative capacity and, secondly, more improved sowing machines are needed."

However, the field crop growers are receiving only small quantities of the seed desired. Yes and the quality of this seed is often quite low. And it can generally be said that a sowing machine which has just come off a production line requires modernization. The machine operators in rural workshops must reequip the principal units of these machines.

"We need seed plates having a single groove and yet for some reason we are being supplied plates having three grooves" stated a team leader at the Kolkhoz imeni Lenin in Leningrad Rayon V. Tyshchenko, "Thus we must either replace them or modify them using a primitive method."

Strict observance of the plant density and growing 90,000-100,000 roots per hectare furnishes an additional increase in yield. Roughly 2 million additional tons of output were obtained throughout the kray during the last five-year plan as a result of having given serious attention to this problem. But this success was achieved by means of manual labor. Everybody, including students and pensioners, go out onto the fields during the busy harvest period. The development of new machines for the beet growing plantations is being delayed. And as a result -- the road leading to use of the industrial method is being opened up very slowly. Beets are presently being grown in accordance with the new method on only 20,000 hectares, that is, on one tenth of all the available fields. However, even on these tracts it becomes necessary at times to employ hoes.

"We feared growing only 4-5 plants per meter" admitted the chairman of the Kolkhoz imeni Kalinin in Kanevskiy Rayon A. Kuzovlev, "The seed was not reliable. We sowed a greater quantity. It was easier to weed the tract than to resow it.

The bottlenecks of the branch and the lag that has developed in the production of machines and seed are certainly lowering the effectiveness of the beet fields. However, even under these conditions many mechanized teams of competing regions are planning on obtaining 450-500 quintals of roots per hectare.

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BRIEFS

ASHKHABAD FLOOD CONDITIONS--Ashkhabad--The night seemed to herald a thunderstorm for Ashkhabad. The sky was lit up by summer lightning and loud peals of thunder could be heard: however, no rain fell. Nevertheless, in the morning several regions of the city had been flooded by muddy water and sludge. The basements of homes were flooded, the telephone netowrk had sustained damage in some areas and domestic animals were lost in some yards. What happened during the night? Recently, very hot weather had prevailed in Ashkhabad and its environs. Even in the shade the temperature reached 40 degrees and the air was like that which comes out of an oven. But later a cool mass of air moved in from the west over the territory of Turkmenistan. The warm and cool air masses came together in the mountainous and piedmont regions of Kopet-Dag and soon thereafter driving rainfall occurred there. Within a matter of minutes, the amount of rainfall which fell equalled the norm for 15 days. After becoming mixed with the snow which lay on the slopes of the mountains, a great mass of water, dirt and melting snow rushed down upon the city at night. "The flood water did not take us completely by surprise" stated the acting chief of the Ashkhabad Weather Bureau N. Zasenkina, when commenting upon the event, "the municipal services were prepared to repel the elements. Special equipment was moved out onto the streets during the night for the purpose of removing the water and cleaning the irrigation network. The damaged telephone network was quickly restored to operations and transport operations returned to normal. Today the city has its usual concerns and nothing is left to remind the residents of Ashkhabad of the natural calamity which befell them. /by V. Knyazev/ /Text/ /Moscow TRUD in Russian 19 May 82 p 4/ 7026

GRAIN HARVEST COMMENCES--Termez, 21 May--The hot weather has accelerated the ripening of grain crops on fields in the southern zone of Uzbekistan. The combines have been moved out onto the grain tracts on farms in the Surkhan-Sherabadskaya Valley. At the Talimaran Sovkhoz and the Kuybyshev and Kyzyl Yulduz Kolkhozes, the initial yields have been very gratifying -- 40 quintals of barley per hectare. Harvesting-transport sowing detachments have been created in Surkhandar'inskaya Oblast. They have been assigned an important task: to harvest their barley and wheat crops in record time, to replow rapidly the areas thus made available and thereafter to sow a secondary crop on them -- corn for grain or corn for silage. The machine operators in Kashkadar'inskaya and Bukharskaya Oblasts are commencing their selective harvesting of grain crops. /by A. Uzilevskiy/ /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 22 May 82 p 1/ 7026

HIGHLY PRODUCTIVE WHEAT SOWINGS--Przheval'sk--The machine operators in Dzhety-Oguzskiy and Issyk-Kul'skiy Rayons were the first in Kirghizia to move their sowing

units out onto the fields. Only seed for the highly productive Przheval'skaya and Bezostaya wheat varieties and the Nadya barley variety is being planted in well prepared soil. These crops will be grown on 100,000 hectares of arable land. Use of the Ipatovo method is ensuring a high work tempo. Radio communications are making it possible to maneuver the equipment on a rapid basis. /Text/ /Moscow GUDOK in Russian 1 Apr 82 p 1/ 7026

TENDING OF BEET FIELDS--The principal agrotechnical measures have been carried out on the plantations of non-transplanted sugar beets. All of the fields have been cleansed of weeds and top dressings and cultivations have been carried out twice. The second watering is nearing completion while the third is starting. Fifty eight percent of the crop is in good condition, 35 -- satisfactory and 7 percent -- in weak condition. The plantations of not-transplanted sugar beets at kolkhozes and sovkhozes in Kantskiy, Sokulukskiy and Issyk-Atinskiy Rayons are better than those of their neighbors. The seed plants at the experimental farm of the Kirghiz MIS /machine-testing station/, the Pervoye Maya and Zavety Lenina Kolkhozes in Kantskiy Rayon, the Druzhba and Krasnaya Zarya Kolkhozes in Sokulukskiy Rayon and at the Syntashe Kolkhoz in Issyk-Atinskiy Rayon are in especially good condition. But the sugar beet seed plants are not being tended in a thorough manner in all areas. One fourth of these plants at the Kolkhoz imeni Kalinin in Panfilovskiy Rayon are very sparse and the plants are being choked out by weeds owing to poor quality weed control work. Poor use is being made of the irrigation water, with a portion of it missing the plantings. The cultivation of the plantations at the Kolkhoz imeni Shopokov in Sokulukskiy Rayon, the imeni Karl Marks and Zavety Il'icha Kolkhozes in Moscow Rayon and the Alga Kolkhoz in Kantskiy Rayon is being carried out late and with violations of the established agricultural practices. At the present time, the seed yield is forming on the plantations of non-transplanted beets. Two months remain before the harvest. Thus, special importance is being attached to constantly maintaining the plantings in a clean condition and the soil in a loose state. In addition, the soil should not be allowed to dry out and a timely campaign must be waged against the pests and diseases. /Text/ /Frunze SOVETSKAYA KIRGIZIYA in Russian 28 May 82 p 2/ 7026

SUGAR BEET SOWING--Lipetskaya Oblast--The sowing of sugar beets is in progress on farms in the central chernozem zone. Dobrinskiy Rayon is in the lead in the Pre-May competition being held on the fields in Lipetskaya Oblast. The decision has been made here to employ the industrial technology for cultivating sugar beets on the entire area made available for this crop -- more than 14,000 hectares. The new method is being employed this spring by the beet growers in Gryazinskiy Rayon, who are competing to achieve a yield of 250 quintals. For the very first time, they have converted over to using the industrial technology in the cultivation of beets and they have employed a number of organizational and technical measures. Thus, seventeen mechanized teams were created on a voluntary basis, with experienced and knowledgeable machine operators being selected for each team. Throughout the entire five-year plan, the teams will be assigned fields and also machine groupings required for the industrial technology. In order to compensate for the shortage of

machine operators, each team has been supplied with broad-swath, multiple-unit assemblies. In essence, this will consist of T-150K tractors with dual USMK-5.4 cultivators mounted up ahead and two 12-row SST-12A sowing machines installed behind. Capacities have been installed for 1.5 tons of liquid concentrate fertilizer, which will be applied simultaneously with sowing the seed. The productivity of such an assembly -- 80 hectares daily. Having reduced the periods for the carrying out of all spring work, the rayon's machine operators are directing their efforts towards ensuring that the sowing work is completed in just 2-3 days. On the whole, a great amount of work is being carried out throughout the oblast in the interest of improving beet production. A scientifically sound system of farming developed by the specialists and scientists includes 110,000 hectares of fallow land. Winter crops will be planted on this land -- the best predecessor arrangement for sugar beets. In keeping with the example set by leading farmers, 200 mechanized teams will grow beets on an industrial basis this year. The roar of motors continues unabated out on the fields day and night. The farmers on many farms have resolved for the month of May to achieve a high level of labor productivity in carrying out their sowing work. /By A. Kat'kalov/ /Excerpts/ /Moscow SEL'SKAYA ZHIZN' in Russian 30 Apr 82 p 1/ 7026

TENDING CROPS--Belgorod, 15 May--The tending of the crops has commenced simultaneously with completing the sowing of sugar beets. The farms in Belgorodskiy, Valuyskiy, Shebekinskiy and some other rayons have commenced mechanized blind cultivation. The thinning out work will commence shortly -- mechanized thinning out of the plants. /by A. Trubnikov/ /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 16 May 82 p 1/ 7026

SUGAR BEET SOWING COMPLETED--Akhuryan (Armenian SSR)--The sowing of sugar beets has been completed in Armenia. Despite the rainfall, the work was carried out during the best agrotechnical periods. In the republic's principal zone for beet production -- approximately 4,000 hectares on the Shirakskiy Plateau were set aside for the sweet roots. /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 19 May 82 p 1/ 7026

USE OF INDUSTRIAL TECHNOLOGY--The farmers in the Chu River Valley in Kirghizia have commenced sowing their sugar beets. The industrial technology is also being employed here more extensively. /Text/ /Moscow IZVESTIYA in Russian 9 Apr 82 p 2/ 7026

POOR BEET GROWING CONDITIONS--The sowing of sugar beets is nearing completion throughout the republic. They have already been sown on an area of 73,100 hectares. This year the industrial technology is being employed on one third of the beet plantations. At the present time, less than favorable conditions for obtaining normal seedlings prevail in a number of rayons. A low supply of soil moisture, especially at the seed placement depth, is having an effect. The farm specialists must undertake specific measures aimed at obtaining the required density for the plants on each beet field and ensuring that the crops are properly tended. /Text/ /Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 24 Apr 82 p 1/ 7026

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LIVESTOCK FEED PROCUREMENT

BELORUSSIAN QUALITY CONTROL OF FEED, INCENTIVES FOR PRODUCTION

Minsk SEL'SKAYA GAZETA in Russian 23 May 82 p 2

/Article: "Sufficient Feed for Livestock Production"/

/Text/ Following the sowing campaign, the republic's farmers are confronted by an equally important task -- the procurement of feed. During the forthcoming wintering period for 1982-82 and in order to ensure an adequate supply of feed for public livestock production and for livestock being maintained on a private basis by the population, it will be necessary to procure no less than 19 quintals of feed units per standard head of large-horned cattle. This means that 2 tons of hay and 3.8, 3.5 and 2.2 tons of haylage, silage and root crops respectively must be laid away for each cow. The potential for accomplishing this is available in the republic. Good yields of grasses and other forage crops are forming in all areas. Based upon the timely and high quality carrying out of all operations, the chief task of the kolkhozes, sovkhozes and agricultural organs at the present time consists of employing progressive technologies, achieving the planned forage harvest and protecting all of the raw materials grown for these purposes.

The Grass Harvesting Periods

A priority condition in the campaign to improve the quantity and quality of feed -- the timely inclusion of all kolkhozes and sovkhozes in the grass harvesting work and ensuring that this work is carried out during the best periods. The data of scientific institutes and many years of experience reveal that these periods are: from the onset in leguminous grasses of budding to the commencement of blossoming and in cereal grasses -- from the heading phase to the commencement of blossoming. In this regard, special importance is attached to ensuring that all of the republic's farms join in the mass harvesting of the cereal grasses in late May or early June. The production and procurement of grass meal should commence at the present time, with use being made for this purpose of winter rye sown for feed purposes. Nor should the mowing of the seed-breeding plots for clovers be overlooked.

The grass harvesting work should be carried out during the phase in which the nutrient content is highest. The harvesting of leguminous grasses should be

completed in no more than 10 days, grass mixtures with a predominance of timothy -- 12 days, meadow fescue -- 8 days, cock's foot -- within 6 days and on the whole the grass harvesting work should be completed no later than 1 July.

The availability of feed harvesting equipment at the republic's kolkhozes and sovkhozes is making it possible to carry out the first cutting precisely during these periods. This ensures that a full-value second cutting will be obtained and even a third cutting in a number of areas, with a substantial improvement being noted in the quality of the feed. The farm specialists must constantly bear in mind that each day of delay in carrying out the harvest work, following the optimum periods, results in protein losses of from 18 to 25 kilograms per hectare of cereal grasses and for clovers -- up to 40-50 kilograms of protein. It must not be forgotten that each day of delay in mowing the seed-breeding plots for clovers produces a shortfall of from 7 to 10 kilograms of seed per hectare.

Feed Procurement Technology

An important condition for improving the quality of feed and retaining the nutrients in them is the extensive use of modern technologies. During the forage procurement period, all of the organizational-technological measures of farms must be directed towards achieving the same goal -- retention in the feed, to the maximum possible degree, of the value of the initial raw material and a maximum reduction in nutrient losses.

The selection of the technology to be employed at each farm must be made based upon the specific conditions, the condition of the grasses, the availability of the required logistical base and upon the production trend with regard to the development of livestock production.

Hay is one of the best feeds for all types of livestock. A kilogram of good quality hay contains 0.55-0.60 feed units, 140 grams of protein and 20-25 milligrams of carotene. However, during hay procurement operations in many rayons and on many farms, use is made of obsolete methods for the sun-drying and drying of cut grasses. A reduction in nutrient losses can be achieved only by accelerating these processes, through the bruising of leguminous grasses and the active turning over of all other types of grasses.

On leading farms the mowing work is carried out during the morning hours as a rule in the interest of retaining all of the feed qualities of the hay.

Fine hay can be obtained by using the method of pressing and drying by means of forced ventilation. The storage of hay prepared in this manner under sheds, in hay storehouses and barns or in correctly composed and well covered stacks and ricks serves to reduce nutrient losses to a minimum. This year the possibility exists of procuring approximately 60 percent of the hay using this method.

Haylage occupies an important place in the feed balance of each farm in the republic. During unstable weather conditions, it is practically impossible to produce haylage in the absence of preserved feed. However, the value of haylage is greatly dependent upon strict observance of the technology developed for placing it in storage. Unfortunately, proper attention is not always given to this problem. It is important to remember that good haylage is obtained when the grass fodder undergoes rapid sun-drying to a moisture content of 45-55 percent, with

picking up and crushing into particles 3-5 centimeters long for trench storage and 2-3 centimeters long for tower storehouses. Great importance is attached to the length of time required to fill a storehouse. It must not exceed 4 days. The tamping down of the bulk should be carried out in a manner such that the temperature of the feed does not exceed 38 degrees. This requires the daily placing in storage of a layer of well packed bulk, the thickness of which is not less than 0.8-1 meter. If the feed is warmed to a temperature greater than 40 degrees, the carbohydrates, proteins and carotene become practically unassimilable for the animals.

The availability of the required equipment this year will enable a majority of the farms, assuming good work organization, to employ the required haylage procurement technology. In the process, it should be borne in mind that if for some reason it is impossible to achieve the required moisture content in the haylage bulk, then it will be necessary in such instances to employ preservatives (benzoic acid, sodium pyrosulphite, sodium bisulphate and others). Under such conditions, a kilogram of haylage will contain no less than 0.33 feed units, 40-50 grams of digestible protein and 40 milligrams of carotene.

Many kolkhozes and sovkhozes throughout the republic have in recent years built many haylage towers. The experience of leading farms reveals that when the proper technologies are employed for harvesting grasses for haylage and for placing it in towers, excellent quality feed is obtained and feed losses are reduced to a minimum. This is why it is necessary this year to ensure that not one tower stands empty

Silage has been and continues to be a principal type of succulent feed at all of the republic's kolkhozes and sovkhozes. An indispensable condition for raising the quality of this feed is that of obtaining it from raw material the moisture content of which does not exceed 65-70 percent. In order to fulfill such a technological requirement, the harvesting for silage must be carried out using: annual leguminous and cereal grass mixtures during the waxy ripeness phase and corn during the milky-waxy and waxy ripeness phase. A high moisture content in the raw material leads to large losses. In such instances, during ensilage, crushed straw should be added up to 10-20 percent of the weight of the fodder. A mandatory condition during ensilage is that of crushing the bulk to particles 3-5 centimeters in size, placing it in lined trenches and tamping it down thoroughly followed by hermetic sealing.

Corn will be the principal silage crop this year. It has a high energy value but its protein and mineral substance content is low. This should be borne in mind when ensiling it; the aftergrowth of clover and alfalfa and nitrogen-containing additives should be added and use should be made of preservatives, especially benzoic acid and the Vikher mixture.

The harvesting of silage crops during the period of their optimum moisture content and dry substance content, in combination with the use of chemical preservatives, serves to guarantee that high quality feed will be obtained with minimal nutrient losses.

Grass meal is an important source for enriching the feed ration with plant protein and for reducing the grain portion of the ration. But this is not cheap feed. Its use is justified if its quality is no lower than the first through the third grades.

A mandatory method during the production of grass meal must be the preliminary sun-drying of the raw material to a moisture content of 65-70 percent.

This year all of the republic's kolkhozes and sovkhozes have sufficient grass sowings and the technical means required for producing high quality grass meal and selling it to the state. Thus, 90-100 hectares of protein-rich grasses should be made available at all of the farms for each standard drying unit. Specialized teams must be organized at each kolkhoz and sovkhoz for delivering the fodder to the units and for ensuring correct operating regimes for the units. The work of an AVM should be organized in two and at times in three shifts.

An overall mandatory requirement when procuring hay, haylage, silage and grass meal is that of ensuring reliable hermetic sealing for the feed harvesting machines and units and reinforcing the sides of the tractor trailers and motor vehicle bodies with additional panels. The specialists and all those associated with the forage procurement operations must devote a maximum amount of attention to the campaign aimed at reducing fodder losses throughout the entire technological chain for feed preparation.

Work Organization

During the feed procurement period and based upon permanent production subunits, mechanized detachments consisting of specialized teams for procuring hay, haylage, silage and grass meal and for providing technical and cultural-domestic services must be created at kolkhozes and sovkhozes throughout the republic. Once again, importance is being attached at the present time to defining more precisely the structure of these detachments and also the practicality of the production tasks and the material incentive measures for the schedules and quality of the feed being procured. The farm specialists must be provided in advance with the work plans for feed production, the priorities for harvesting the various areas must be established and the schedule-routes prepared. Concern must also be displayed for ensuring that each unit is operated in a highly efficient manner and that productive work is carried out by all of the teams. The flow line-group method of operation has been organized in all areas and strict control is being exercised over proper observance of the technology. The feed harvesting equipment must be operated throughout the entire light portion of the day. In short, all measures concerned with the organization of labor must be directed towards ensuring flow-line operations and rhythmic work throughout the entire feed harvesting production line.

In view of the shortage in some regions of the specialized equipment required for procuring haylage and harvesting corn and other types of feed, inter-farm mechanized detachments should be created based upon cooperation in the use of material and labor resources among the kolkhozes, goskhozes /state farms/ and Sel'khoztekhnika.

Control Over the Quality of the Forage

An object of special concern among specialists attached to kolkhozes, sovkhozes and the agricultural administrations of rayon executive committees must be that of efficiently organized control over the quality of the feed being procured. This consists of the regular selection of raw material samples and determining their moisture and carotene content, so as to be able to introduce appropriate changes in the technology or make a decision with regard to commencing the feed procurement

work. If it is not possible at a farm to study the raw materials based upon these indicators, then the samples must be sent to regional feed or veterinary laboratories.

Following 2-3 weeks, the prepared feed is subjected to complete zootechnical analysis, with wages and bonuses being paid out to those workers participating in the feed procurement work based upon the results of this analysis. The kolkhoz and sovkhoz leaders must ensure that these tests are carried out at laboratories on a timely basis. The quality of each ton of feed procured must be ascertained. Only if the work is carried out in this manner will it be possible to influence the feed procurement technology and ensure the intelligent and efficient use of the feed.

Wages

In the interest of increasing the material interest of workers engaged in feed procurement work, achieving high quality and shortening the harvesting periods, it is recommended that extensive use be made of the lump wage payment system in addition to the piece-rate wage.

In the case of the lump wage payment system, the rate for a ton of procured hay, silage, haylage or other types of feed includes the following: the basic payment for the amount of work carried out (in accordance with the technological chart), an additional payment -- for the quality of the feed and a raised payment -- for the work periods for procuring the feed. The additional payment for feed quality is included in the lump wage payment rate in the following amounts: for Grade I feed -- 60, Grade II -- 40 and Grade III -- 20 percent of the wage (basic) fund. The raised payment included in the lump wage payment rate is based upon the fact that during the first 10 days in the mass harvesting of each crop separately, the wages of tractor operators are based upon rates that are increased by 60 percent provided the feed is of Grade I or II category and during the next 10 days -- by 30 percent. Moreover, the amount of the raised payment is differentiated depending upon the quality of the feed.

For example, a feed procurement team at a sovkhoz has been assigned responsibility for 400 hectares of perennial grasses. The specific cropping power is determined to be 40 quintals of hay per hectare, including 26 quintals from the first cutting. The gross yield of hay from the first cutting was 1,040 tons (400 hectares X 26 quintals per hectare). The wage fund, computed according to the technological chart for the harvesting of grasses and transporting the hay to the storage areas, is 4,700 rubles. The additional payment for 1,040 tons of Grade I hay will be 2,820 rubles (4,700 rubles X 60 percent). The raised payment for the first 10 days of mass hay procurement work also amounts to 2,820 rubles (4,700 rubles X 60 percent). Thus the lump wage payment rate for a ton of Grade I hay during the first 10 days will equal 9 rubles and 94 kopecks (10,340 rubles : 1,040 tons).

During the next 10 days of procuring the same amount of 1,040 tons, the overall payment amount will be 8,930 rubles (4,700 rubles - 2,820 rubles - 1,410 rubles), while taking into account the additional payment for Grade I quality feed -- 60 percent and the raised payment of 30 percent of the wage fund. Hence the lump wage payment rate for 1 ton of Grade I hay during this period will be 8 rubles and 59 kopecks. The computations of the lump wage payment rates for a ton of Grade II or Grade III hay are carried out in this same manner.

Scale for Referring To the Various Types of Feed According To the Principal Indicators and Grades of Quality

	(1) Сено												(7) Травяная мука				
	(2) нормы для классов												(2) нормы для классов				
	(3) сеяных бобовых			(4) сеяных злаковых			(5) сеяных бобово-злаковых			(6) естественных сенокосов							
	I	II	III	I	II	III	I	II	III	I	II	III	I	II	III	IV	V
(8) Содержание сырого протеина (в проц.) — не менее	14	10	8	10	8	6	11	9	7	9	7	5	20	16	15	14	12
(9) Содержание каротина (мг в кг)—не менее	30	20	15	20	15	10	25	20	15	20	15	10	230	180	150	120	80
(10) Содержание клетчатки (в проц.)—не более	27	29	31	28	30	33	27	28	32	28	30	33	22	24	27	30	35
(11) Содержание влаги (в проц.) — не более	17	17	17	17	17	17	17	17	17	17	17	17	8—12	8—12	8—12	8—12	8—12

	(12) Сенаж			(13) Силос		
	(2) нормы для классов					
	I	II	III	I	II	III
(14) Массовая доля сухого вещества (в проц.):						
(15) бобовом	40—55	40—55	40—55	—	—	—
(16) злаковом и бобово-злаковом	40—60	40—60	40—60	—	—	—
(17) злаковом	—	—	—	—	—	—
(18) Массовая доля в сухом веществе сырого протеина (в проц.) — не менее:						
(15) бобовом	15	13	11	14	12	10
(19) бобово-злаковом	13	11	9	12	10	8
(17) злаковом	12	10	8	10	8	8
(20) Каротина в сухом веществе (мг в кг)—не менее	55	40	30	60	40	30

Key:

1. Hay
2. Norms for grades
3. Sown leguminous grasses
4. Sown cereal grasses
5. Sown leguminous-cereal grasses
6. Natural haying lands
7. Grass meal
8. Crude protein content (in percent) -- not less than
9. Carotene content (mg in kg) -- not less than
10. Cellulose content (in percent) -- not more than
11. Moisture content (in percent) -- not more than
12. Haylage
13. Silage
14. Mass proportion of dry substance (in percent):
15. Leguminous grasses
16. Cereal and leguminous-cereal grasses
17. Cereal grasses
18. Mass proportion of crude protein in dry substance (in percent) -- not less than:
19. Leguminous-cereal grasses
20. Carotene in dry substance (mg in kg) -- not less than

In those instances where horse and manual labor operations constitute no more than 10-15 percent of the wage fund in the technological chart, a single lump wage payment rate per ton of feed is computed for the machine operators and workers engaged in horse or manual labor. If these expenditures exceed 15 percent, the lump wage payment rate is computed separately for the machine operators and the workers engaged in horse or manual labor.

When paying wages to workers attached to brigades, detachments and teams, based upon the lump wage payment rates for a ton of feed and taking into account the quality of the feed (prior to computations according to the lump wage payment rate), use can be made of a periodical (non-schedule) advance for time worked, in accordance with the piece-work wage rates for categories III and IV, established

respectively for mechanized and horse-manual operations. The computations for workers attached to brigades, detachments and teams, in accordance with the lump wage payment rates, are carried out after the feed has been delivered and credited and a document has been presented on the results of an analysis of the quality of the feed.

Under the piece-rate wage system, it is recommended that feed procurement workers be paid for the volume of work carried out in accordance with rates computed based upon the output norms approved at a farm, the category of the work carried out and upon the wage rate, with the quality of the feed procured being taken into account. During the first 10 days in the mass procurement of feed for each crop separately, the wages for tractor operators who fulfill their shift output norms are made at rates which are increased by 60 percent and in the event of non-fulfillment -- by 30 percent. During the next 10 days the rates are increased by only 30 percent regardless of fulfillment of the output norms.

For all other workers engaged in feed procurement work, throughout the first 20 days following the commencement of mass harvesting work, the rates are raised by 15 percent regardless of fulfillment of the output norms. It is recommended that the leaders of kolkhozes and sovkhozes establish an additional payment for the procurement of Grade I feed -- 60 percent, Grade II -- 40 and Grade III -- 20 percent of the piece-work wage for this work.

The drivers of trucks engaged in feed procurement operations, assuming that they fulfill their established transporting tasks, are awarded bonuses as follows: for the piece-work wage system, up to 25 percent of their wages and for the time-rate wage system -- up to 15 percent of the appropriate portion of the monthly wage rate.

The directors of sovkhozes and other state agricultural enterprises are authorized to issue (free of charge), in the form of an additional payment to workers engaged in procuring, hay, silage, haylage and in the production of dehydrated feed and to sell at the planned production cost to permanent workers at sovkhozes and other state enterprises who maintain their own domestic livestock, up to 10 percent of the hay, silage and food roots procured and 20 percent of the straw and also to issue up to 50 percent of the hay (free of charge) to workers engaged in the manual mowing and procurement of hay on lands deemed not suitable for the operation of tractors and machines. A payment is not made for hay procurement work. In addition, for obtaining an above-plan yield of food roots, it is recommended that 30 percent of the above-plan yield be issued in the form of an additional payment in kind.

In order to raise the material interest in carrying out feed procurement work in a high quality and timely manner, the directors of sovkhozes and other state enterprises are authorized to sell grain to tractor operators (as they wish), in the form of wages due them in accordance with the state procurement prices established for the sovkhozes. In connection with the harvesting of natural and sown brasses for the production of haylage and grass meal and for the preparation of hay, it is recommended that grain be sold to the tractor operators in the amount of up to 700 grams per ruble of earnings at this work, but no more than 6 quintals per worker annually.

From two to four quintals of grain (free of charge) are authorized to be issued to the tractor operators of sovkhozes and other state enterprises and the harvest-

transporting complexes (detachments) of rayon associations of Sel'khoztekhnika and also to those tractor operators and other machine operators performing temporary duty in the harvesting of silage and forage crops, for having fulfilled the seasonal norm established on a farm in a high quality manner and without losses.

7026
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RECOMMENDATIONS FOR FEED QUALITY IMPROVEMENT

Moscow ZHIVOTNOVODSTVO in Russian No 4, Apr 82 pp 11-13

/Article by K. M. Solntsev, academician of the All-Union Academy of Agricultural Sciences imeni V. I. Lenin: "To Improve the Quality of Feed and To Utilize it Efficiently"/

/Text/ The intensification of agriculture and increase in capital investments in the agrarian sector of the economy ensure a steady rise in the production of farm and livestock products. At the same time, the importance of high-quality feed is indisputable. In its scale the task of improvement in the quality of feed, in practice, concerns every kolkhoz, interfarm enterprise and sovkhoz.

A reduction in the quality of hay, haylage, silage, grass meal, straw, root crops and other feed is the consequence of a violation of the technology of their preservation and primitive storage conditions. In addition to the losses of the raw feed mass itself, big losses occur as a result of the formation of secondary fermentation and violation of the technology of utilization of preserved feed.

A unified service of control over the quality of feed was organized in the country in 1977. The wide network of special laboratories contributes to the performance of the necessary research and to a prompt information on the quality of procured feed for farms and agricultural bodies.

As investigations showed, the quality of feed procured in 1981 was much higher than during the preceding year. For example, 14 to 19 percent more first- and second-category hay was procured on farms in the RSFSR, the Ukrainian SSR and the Belorussian SSR and 38 to 47 percent more first- and second-category silage, on farms in the Uzbek SSR and the Azerbaijan SSR.

The increase in the share of production of first-category hay and haylage is due to the correct organization of feed procurement, making feed production an independent sector of agriculture and improvement in the conditions of feed storage.

Feeding low-quality hay, haylage and silage to animals and the shortage of green feed in summer gave rise to the harmful practice of introduction of groundlessly high rates of concentrates on many farms.

Investigations at the All-Union Order of the Red Banner of Labor Scientific Research Institute of Animal Husbandry, the Belorussian Scientific Research Institute of Animal Husbandry, the Belorussian Agricultural Academy and zootechnical scientific centers of the Baltic Republics have established that, when low-quality hay is fed to milch cows (previously they were given high-quality hay) and, at the same time, the previously attained level of productivity is maintained, the consumption of concentrates must be increased. If in summer cows are grazed after a good pasture on a bad one, to avoid a decrease in milk productivity, it is necessary to increase the rate of concentrates with a daily yield of 13.5 kg of milk from 1.8 to 3.4 kg and of 18 kg of milk from 3.6 to 5.2 kg. As a rule, such violations in the ration structure lead to a deterioration in the reproductive capabilities of the animal organism.

The use of a significant quantity of low-quality feed in beef production caused a big overconsumption of feed, especially of concentrates. During the period from 1962-1965 to 1976-1979 the expenditures of feed per kg of increase in the live weight of large-horned cattle rose from 11.8 to 13.1 fodder units and the consumption of concentrates increased 2.5-fold.

It must be noted that production workers have begun to be critical of the haylage-concentrate type of feeding recommended for farms with an indusrial technology of beef production. At the same time, the proportion of concentrates (in nutritiousness) for young fattening stock was officially determined at the level of 50 to 60 percent. If the ration contains only haylage and concentrates and, at the same time, haylage is of a low quality, the level of actual consumption of haylage is lowered from 40 to 30 percent and of concentrates is increased to 80 percent.

Along with an active implementation of measures to improve the quality of all types of feed it is necessary to specify the recommendations for an extensive use of haylage-concentrate and other concentrate types of feeding of young large horned cattle.

As a rule, with the exception of farms fattening animals with the use of pulp or malt residues, most farms with an industrial technology of beef production, in addition to haylage and concentrates, widely use pasture grass, hay, straw, silage, the waste of seed, potato, vegetable and flax growing and so forth. Such a type of feeding can be called mixed.

At the same time, an analysis of the reasons for the overconsumption by many farms of concentrated feed in milk and meat production makes it possible to quite clearly observe the relationship between the level of the full biological value of concentrates in rations and the productivity of animals.

The high-grade mixed feed used by many farms in milk and meat production comprises no more than 35 to 45 percent of the total amount of the fed concentrates. The remaining amount is made up of grain mixtures insufficiently enriched or not enriched at all and deficient in protein, lysine, vitamins and macro- and microelements. The use of these grain mixtures (of two or three components of grass crops) lowers the productive effect of concentrates by 20 to 25 percent. Therefore, if high-grade mixed feed, not grain mixtures, is fed on many farms, the overconsumption of grain can be reduced by 20 to 25 percent.

The introduction of grass and pulse crops and enriching additives from biologically active substances into the grain mixture increases the productive effect of feed by 18 to 22 percent.

Several highly effective formulas of enriching additives of grain mixtures for cows, young large-horned cattle, hogs and sheep were developed and tested in the Belorussian Agricultural Academy. The annual economic effect from their utilization exceeded 1 million rubles.

The low provision of farms with storage facilities is a serious difficulty in an improvement in the quality of feed, preservation of its natural nutritiousness and improvement in its edibility.

The storage of hay outdoors in ricks and stacks is one of the reasons for the big waste of hay unsuitable for feeding. True, every hay rick in the field, meadow or farm has a so-called roof formed from the feed itself. For every hay rick on a farm--there are approximately 25 to 40 hay ricks on an average farm--every year a hay roof is built, for the formation of which a large amount of feed is used.

Hay ricks must have a minimal surface. A hip roof, as compared with a U-shaped form of the rick, better protects feed against rain and snow melting. However, the waste on so-called "odon'ya" and "oversh'ya" comprises 8 to 10 percent.

Highly productive machines--stackers (SNU-0.5 or SShR-0.5)--are now used in ricking. However, ricks are not always made correctly by means of them. Sometimes the form and uniform packing are disregarded. As a result, cavities are formed on the surface and water accumulates in them, later penetrating into feed. The storage of coarse feed in such ricks costs a great deal, because losses on "odon'ya" and "oversh'ya" [stacks of unthreshed grain] comprise 12 to 15 percent and more.

Of no lesser importance is the technical improvement in the plans for feed capacities. Long-term experience in the use of concrete trenches has shown that, unfortunately, in these types of storage facilities it is not always possible to obtain good-quality feed. Inferior-quality haylage and silage obtained in concrete trenches is the most frequent phenomenon in the increased moisture zone, because the trench poorly protects the preserved feed against atmospheric precipitation. Part of the water, even when feed is covered with a polymer film, penetrates into feed through the grooves between the walls of trenches and the ends of film strips, moistens its lower layer excessively, washes out nutrients (soluble carbohydrates, aminoacids, vitamins and mineral salts) and the preservative (lactic acid or the introduced chemical preservative) and changes the feed pH. According to the investigations of the All-Union Order of the Red Banner of Labor Scientific Research Institute of Animal Husbandry, at the same time, the losses of general nutritiousness can additionally comprise up to 23 percent and more.

In connection with this the recommendation for the construction of a light slate roof over silage and haylage trenches (for farms in the increased moisture zone) is fully substantiated. There is hardly any spoilage or waste of haylage in these storage facilities (in trenches without covers the layer of spoiled feed reaches 15 to 20 cm).

Conditions for a prolonged storage of haylage and silage with negligible losses of nutrients are created in these trenches. In such capacities it is possible to accumulate reliable insurance feed reserves. Our experience (K. M. Solntsev and I. P. Meshcheryakova, 1979-1981) in a 2-year storage of silage and haylage in covered experimental storage facilities showed that the losses of the dry substance in silage comprised 12.4 percent and with an addition of a chemical preservative, 6.4 to 8.0 percent. In haylage the losses were even smaller.

The construction of feed storage facilities carried out on farms requires coordinated planning. In practice some silage and haylage storage facilities are built near places of cultivation of fodder crops, partially near livestock barns. Some of them are built as part of farm warehouses. As a result, the desired goal is not always attained, the proper control over the state of feed storage and quality is not ensured and the mechanized loading, transportation and distribution of feed are hampered.

After an all-around study of the organization of construction of feed storage facilities, we proposed the construction of feed yards (one or two, depending on the size of a farm).

The feed yard is a fenced territory. It should have the following: a sector for the storage of hay and straw with sheds and awnings equipped for active ventilation; a sector of haylage and silage storage facilities, preferably under an awning; a sector of root crop storage facilities; a sector of warehouse premises for grain fodder and granulated feed, as well as a separate place for pelletized feed.

On the yard territory there are premises for the storage of mineral feed and vitamin additives and capacities for chemical preservatives. Here it is necessary to plan a feed shop and a shop for the preparation of mixed feed.

On the territory of the feed yard it is necessary to place a small chemical laboratory for the determination of the quality of feed and near the entry to the yard, a weighbridge.

The territory of the feed yard should have a hard surface, electric illumination and premises for the accomodation of service personnel.

It is advisable to locate the feed yard at the place of the greatest concentration of livestock farms with due regard for the availability of access roads and the place of location of fodder crop rotations and meadow and pasture land.

The construction of feed yards will require an accelerated solution of the problem of training specialists in a new field--technological engineer for feed preparation (higher specialized education) and technical expert in feed preparation (secondary specialized education).

The technological engineer should be responsible for the quality of feed, technically competent filling of storage facilities with raw materials and removal of preserved feed from them. Every feed batch is supplied with a document indicating the mass, nutritiousness, quality category and function of feed. The technical personnel of the feed yard ensures the control over the quality state of the feed stored in capacities and carries out a preventive repair of feed storage facilities and all the structures of the feed yard.

With due regard for the size and specialization of animal husbandry of farms in different zones it is advisable to develop several variants of standard plans for the construction of feed yards. For the farms on which a certain number of feed capacities are built they should be taken into consideration when such a yard is organized.

A well-built feed yard, correctly selected personnel for its servicing and an efficient system of feed accounting will contribute to the strengthening of the feed base of animal husbandry, lending it a stable nature and solution of the problem of improvement in feed quality.

Feed yards are being built in Chelyabinskaya, Zhitomirskaya and Vinnitskaya Oblasts. In Chelyabinskaya Oblast the South Ural State Institute for the Planning of Rural Construction developed a plan for a feed yard for 800 and 1,200 cows and 6,000 heifers. The Rossiya Pedigree Sovkhoz in Chelyabinskaya Oblast is the first farm that built a feed yard. A total of 850 tons of hay, 65 percent of which was of the first category, 30 percent, of the second category and 5 percent, of the third category were stored in four capacities of the feed yard in 1980. The entire silage prepared with benzoic acid was included in the first category. The quality of feed also affected the productivity. A total of 4,100 kg of milk per cow in a herd of 2,290 head were obtained there.

The construction of feed yards with a complex of feed storage facilities and a feed processing shop can be accelerated considerably if prefabricated structures are used.

The establishment of feed yards should be considered an important progressive measure, which will make it possible to fulfill the tasks for an increase in the production of meat, milk and other farm products during the 11th Five-Year Plan.

11,439
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PROGRESS, GOALS OF UZBEK LIVESTOCK PRODUCTION

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/Article by V.V Britov, chief of Livestock Production Administration of Ministry of Agriculture for the Uzbek SSR: "Labor Pace of Livestock Breeders of Uzbekistan"/

/Excerpts/ Uzbekistan has been and continues to be the country's principal cotton base. At the same time, livestock production is being transformed into a large-scale branch. Its further development serves as the foundation for solving the republic's food problem. Livestock production truly started to develop throughout the republic following the March (1965) Plenum of the CC CPSU. During the past few years, considerable increases have taken place in the numbers of all types of livestock and poultry, their productivity has been raised and increases have been recorded in the production and procurement of animal husbandry products. During these years the production of meat at all categories of farms increased by more than twofold, milk -- by a factor of 2.5 and eggs -- by almost three fold. In the public sector, milk production increased by threefold and eggs -- by a factor of 10.

Beef and dairy cattle husbandry have developed at a rapid rate. Qualitative changes have taken place in the pedigree structure of the livestock. At the present time, 99 percent of the cattle are classified as being of pedigree or improved condition.

During the Tenth Five-Year Plan, the republic's kolkhozes, sovkhozes and inter-farm enterprises achieved considerable successes in the development of livestock production. Compared to the Ninth Five-Year Plan, the average annual production of beef increased by 31 percent, milk-- by 42 percent, eggs -- by 65 percent, wool -- by 6.5 percent and karakul pelts -- by 4.1 percent.

During the years of the five-year plan, the milk yield per cow increased by 532 kilograms and in 1980 it amounted to 2,444 kilograms, the egg production of laying hens came to 160 eggs and the average delivery weight of large-horned cattle was raised to 384 kilograms, hogs -- to 102 kilograms and that for sheep and goats -- to 43 kilograms.

The logistical base of livestock production became stronger, improvements were realized in the pedigree structure of the livestock and poultry and a great amount of work was carried out in connection with concentration and intra-farm specialization, cooperation, mechanization, automation and the conversion of the branch over to an industrial technology for the production of goods. A great amount of work was also carried out with regard to implementing improvements in feed production and feed preparation.

In carrying out the decisions handed down during the 26th CPSU Congress, the 20th Congress of the Communist Party of Uzbekistan and the November (1981) Plenum of the CC CPSU, the republic's kolkhozes, sovkhozes and inter-farm enterprises achieved further successes during 1981 in the development of livestock production.

During the first year of the Eleventh Five-Year Plan, the plans for increasing the numbers of livestock and poultry and also the production and procurements of livestock production products were successfully fulfilled. The number of large-horned cattle increased by 3 percent, hogs -- by 14, sheep and goats -- by 4 and poultry -- by 13 percent. The milk yield per cow increased by 73 kilograms and amounted to 2,517 kilograms and the average egg production of laying hens was 162 eggs. Meat production increased by 8 percent, milk -- by 5 and eggs -- by 8.6 percent. An increase took place in the sale of livestock products to the state.

High indicators in the development of dairy livestock production were achieved by the farms in Tashkentskaya Oblast. Here the milk yield per cow was raised to 3,442 kilograms of milk. On farms in Kommunisticheskiy Rayon in this same oblast, the milk yield was 4,280 kilograms and in Kalininskiy Rayon -- 4,050 kilograms per cow. Last year, 19 of the republic's rayons obtained an average of more than 3,000 kilograms of milk per cow and on 32 farms -- more than 4,000 kilograms. The Chinaz Sovkhoz-Technical School and the Kommunizm Kolkhoz in Yangiyul'skiy Rayon surpassed the 5,000 kilogram level.

At the same time, some rayons and farms are not making sufficient use of the internal reserves and potential that are available for the further development of dairy livestock production.

Despite the availability at the kolkhozes and sovkhozes of large-horned cattle, which based upon their pedigree data and assuming good feeding, tending and maintenance are capable of furnishing from 3,000 to 3,500 kilograms of milk, only 16 percent of the farms have achieved such productivity.

In recent years a great amount of work has been carried out throughout the republic aimed at mechanizing labor-consuming processes on the farms. In 1981, the level of mechanization on large-horned cattle farms with regard to the supplying of water was raised to 67.3 percent, for issuing of feed -- to 51, for the removal of farmyard manure -- to 57.3 and for milking -- to 85 percent.

Such programs as the concentration and specialization of agricultural production based upon inter-farm cooperation and the conversion of livestock production over to an industrial basis are being carried out throughout the republic in an active manner.

At the present time, 212 farms are specializing in the production of grain and livestock products, including sheep raising products -- 98, pig farming -- 14, poultry production including poultry factories -- 50 and beef cattle production and the fattening of cattle -- 45 farms. In addition, farms have been organized for the production of feed, raising of alfalfa seed and the production of honey and 98 inter-farm stations for the maturing and fattening of large-horned cattle and for the raising of replacement heifers are in operation.

Main cost accounting administrations for the production of livestock products on and industrial basis (Uzglavzagotzhivprom, Uzptitseprom, Uzglavkarakul'prom,

Uzglavmezhkhozzhivpredpriyatiye, Uzpcheloprom) have been created for directing the specialized livestock production farms of the Ministry of Agriculture for the Uzbek SSR.

The farms of these administrations are producing more than 40 percent of the meat, 76 percent of the eggs, 67 percent of the wool and 87 percent of the astrakhan pelts.

Uzglavzagotzhivprom includes four complexes for the raising of calves and the fattening of large-horned cattle, each capable of accommodating 10,000 head. The following facilities will achieve their planned capabilities in the near future: the hog complexes Gallya-Kuduk for 108,000 head, Sergeli for 54,000 head and the Zarbdar and imeni Frunze each for 24,000 head.

The majority of the karakul sheep are concentrated on specialized farms of Uzglavkarakul'prom.

The karakul breeding farms are the pride of Uzbekistan: the Uzbekistan State Breeding Plant, Mubarek and Karakum, where the output of the initial strains of the black karakul exceeds 97 percent, including 60 percent of the valuable jacket strains.

The karakul breeding sovkhozes have achieved a high output of karakul lambs. In Kashkadar'inskaya Oblast, 150 lambs were obtained in 1981, in Bukharskaya Oblast -- 141, in Samarkandskaya Oblast -- 138 lambs per 100 ewes.

However, the karakul breeding farms also have their own shortcomings, for example the low proportion of ewes in a herd (on farms in the Kara kalpakskaya ASSR -- 40 percent, Kashkadar'inskaya Oblast -- 52, Dzhizakskaya Oblast -- 55 percent).

Much has been accomplished in Uzbekistan in connection with converting dairy livestock production over to an industrial technology for milk production. One hundred and seventy one dairy complexes for 89,300 cows have been placed in operation. The proportion of milk being produced at dairy complexes has been increased by a factor of four above the figure for 1975 and amounts to 19.7 percent of overall milk production.

But the construction of complexes is not being carried out in a high quality manner in all areas. Many of them have been placed in operation while still unfinished. In particular, many areas of unfinished work appear in connection with the installation of water supply systems, boilers, feed preparation shops and milking and refrigeration units. Rayon subunits of Goskomsel'khoztekhnika are not providing satisfactory technical services for the dairy farms or dairy complexes.

The republic's kolkhozes and sovkhozes have achieved definite successes in the development of sheep and goat breeding. In addition to increasing the numbers of sheep and goats, an increase has also taken place in the production of meat. The proportion of sheep and goat meat is 26 percent of overall meat production. There are four large-scale goat breeding farms in operation for the breeding of goats of the Soviet woolen strain.

Horse breeding, camel breeding, rabbit raising and fishing are all developing successfully throughout the republic.

Improvements in breeding work have played an important role in achieving improvements in livestock production.

A republic association for breeding work, the artificial insemination of agricultural animals and for the procurement and sale of pedigree and improved livestock -- Uzglavplemob"yedineniye -- was created for the purpose of directing breeding work based upon the republic's gosplemstantsiya /state breeding station/ and plemzhivob"yedineniye. In addition, oblgosplempredpriyatiya /oblast state breeding enterprises/ were organized in each oblast.

The importing of pedigree and improved large-horned cattle from other republics and the introduction of artificial insemination for agricultural animals made it possible within a brief interval of time to improve considerably the pedigree structure for the large and small-horned cattle in the public sector.

In the breeding of large-horned cattle, use is made of semen obtained from 150 high quality bulls, with the semen being maintained in a deep frozen state. Each year, more than 1.5 million such semen dosages are obtained from these bulls. At the present time, there are 1,563 artificial insemination stations for large-horned cattle in operation and these stations have modern equipment at their disposal. Last year a competition was held for insemination-technicians for the very first time. Henceforth, this competition will be held on a regular basis. Work is being carried out throughout the republic aimed at improving the work of the breeding plants and farms. The number of quality appraisals for large-horned cattle is increasing with each passing year.

Nevertheless, the level of the breeding work being carried out at kolkhozes and sovkhozes throughout the republic is still not in keeping with the tasks assigned to the livestock breeders by the party and government with regard to further increasing the production of meat, milk and other livestock products.

In the interest of further improving breeding work, the Ministry of Agriculture for the Uzbek SSR, jointly with the Uzbek Scientific-Research Institute of Livestock Production, developed an all-round plan for selection-breeding work in livestock production based upon the species and strains of animals.

The introduction of the flow line-departmental system for milk production must become a strong reserve for raising milk production. Forty six farms have already converted over to this progressive method. However, we possess very little experience in this work. The organization of departments for increasing the milk yield and for the insemination of cows continues to be a bottleneck.

In recent years, much has been accomplished throughout the republic in connection with improving the sanitary condition of the farms and organizing the continuous operation of the milk laboratories. Constant control over the quality of the milk and the issuing of material incentives to workers for having raised the quality of their milk have produced positive results.

Whereas in 1974 only 29 percent of the milk sold to the state by the kolkhozes and sovkhozes was of 1st grade quality, by 1981 this figure had been raised to 90 percent.

The republic's veterinary service has carried out a great amount of work aimed at preventing parasitic and infectious diseases in livestock production.

In recent years, much has been accomplished with regard to strengthening the feed base. The sowing areas for forage crops have been increased in size and their cropping power raised. In 1981 the cropping power for an alfalfa sowing of past years for hay was 119.4 quintals, corn for silage and green feed -- 288 and food roots -- 328 quintals per hectare. Cotton-alfalfa crop rotation plans and new and highly productive varieties of forage crops are being introduced into operations. The plans call for converting over to the year-round use of irrigated lands through the extensive introduction of secondary, intermediate and combined sowings.

Last year, large areas were set aside at the kolkhozes and sovkhozes for rape, winter oats and rye. This has made it possible this year to begin feeding green feed to the animals earlier and this in turn has raised their productivity.

Despite the fact that a great amount of work has been carried out throughout the republic in developing public livestock production, many unused opportunities and reserves still remain in this branch. In conformity with the decisions handed down during the 26th CPSU Congress, specific measures have been outlined throughout the republic for accelerating the development of livestock production, measures which call for an average annual production of meat in dressed weight of 400,000-410,000 tons, milk -- 2.5-2.7 tons, wool -- 20,000-21,000 tons and karakul pelts -- 2.25 million.

The practical implementation of the planned measures calls for the construction and expansion of livestock complexes for the raising and fattening of large-horned cattle for 110,000 head, dairy complexes for 67,400 cows, complexes for the raising and fattening of hogs for 594,000 head and also meat and egg poultry factories and poultry breeding reproducers.

Considerable resources are being allocated for the construction of new and the modernization of existing enterprises for the production of mixed feeds.

During the Eleventh Five-Year Plan, 500,000 hectares of irrigated land are to be made available for agricultural use. This will make it possible to master completely the cotton-alfalfa crop rotation plans and to increase sharply the production of feed.

The strengthening of the feed base and improvements in the breeding and productive qualities of the agricultural animals will make it possible, by the end of the five-year plan, to increase considerably the number of animals and to raise their productivity. The plans call for the average milk yield per cow to be raised to 3,000 kilograms of milk by 1985 and in regions of developed dairy livestock production -- to 4,000 kilograms and the egg production of chickens -- to 200 eggs per laying hen.

The agricultural workers in the Uzbek SSR have undertaken high socialist obligations for 1982. Thus they have vowed to increase meat production by 9 percent, milk by 7 and eggs by 13 percent; to raise the milk yield per cow to 2,600 kilograms and to obtain an average of 165 eggs from the laying hens; to

raise the average delivery weight of large-horned cattle to 400 kilograms, hogs to 110 and sheep to 45 kilograms. The plans call for no less than 82 calves, 132 lambs and baby goats and 2,500 young pigs to be obtained from every 100 female animals; to procure 7.5 million tons of coarse feeds, including 2.65 million tons of alfalfa hay, to lay away 4.3 million tons of silage and to produce 215,000 tons of vitamin meal.

In the future, the republic's livestock breeders will persistently strive to further improve all branches of livestock production and make their own contribution towards preparing in a worthy manner for the 60th anniversary of the USSR.

7026
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EQUIPMENT PROBLEMS WITH PROCESSING OF RABBITS, FOWL

Moscow IZVESTIYA in Russian 21 May 82 p 3

/Article by A. Dolenko, A. Sabirov, V. Sukhachevskiy and S. Troyan, special correspondents of IZVESTIYA: "Rabbit on the Run"/

/Text/ Kuybyshevskiy Rayon is rightfully called a rabbit raising rayon in Zaporozhskaya Oblast. The fluffy animals are willingly bred at almost every farmstead here. When fall comes, people rush to the Rozovskiy Fattening Sovkhoz and to the procurement office of the rayon union of consumer cooperatives to deliver their output. Last year D. Kalina and L. Borshch, residents of the village of Smirnovo, each sold 2.5 quintals of dietetic meat to the state. N. Kat'kali and P. Simonenko from neighboring settlements brought more than 200 rabbits to the sovkhoz that was instructed to accept small animals from the population.

"To raise rabbits is a simple matter. It is much more complicated to deliver them," people complain.

Indeed, in order to sell their goods, people have to overcome many obstacles; for example, such as the following: In accordance with the requirements of the Berdyansk Meat Combine the Rozovskiy Sovkhoz is supposed to deliver a batch of rabbits (no more than 1,200 head--this is the first condition) by 1 pm. In order to keep to the schedule, the sovkhoz accepts animals from the population from 5 am to 9 am. The question arises: When must a resident of the village of Smirnovo get up in order to be on time if the sovkhoz is 50 km away? Moreover, it is not known whether his rabbits will be among the 1,200 "lucky ones." If they are not, the animals will have to be transported back. This is what often happens.

"What can you do," N. Zhuravel', general-director of the production association of the meat industry, makes a helpless gesture. "The enterprise is not made of rubber, its capacities are limited."

As a result, many people who only yesterday raised rabbits, give them up today. A. Alekseyenko, fitter on the 40 Let Oktyabrya Sovkhoz, pensioner I. Yares'ko and I. Starodub, resident of the settlement of Kuybyshevo, confirm this conclusion.

"The delivery of rabbits is a seasonal business," says A. Potapenko, first secretary of the Kuybyshevskiy Rayon Party Committee. "Therefore, meat combines should reorganize their work. During 'rabbit peak' days the procurement offices of the

rayon consumer society must also operate more actively. However, it is not so simple for them to do this. For example, the Kubyshev Procurement Office is capable of accepting no more than 40 rabbits per day. Every office equips the 'rabbit slaughtering shop' in a confused way. To this day planning organizations and the industry have not offered a standard plan for small shops and equipment for them."

Thus, the rabbit travels tens and hundreds of kilometers to processing places.

However, perhaps only rabbits in Zaporozhskaya Oblast have no luck? Perhaps in other rayons they enjoy respect and attention? Alas. The rabbit is an unrespected figure almost everywhere. When last fall we had occasion to visit villages in Cherkasskaya Oblast, many villagers, who excellently engage in this enterprise on private plots, not without reason complained that it was very difficult to deliver the raised animals. When a procurement official comes to a village, a downright contest is held. Not many big-eared animals are among those selected. As a rule, the rabbits accepted are much fewer than those offered by residents.

"Where will we process all these animals?" again the same usual phrase of procurement officials.

N. Verchenko, deputy chairman of the Ukrainian Cooperative Union, reported that the republic's cooperative workers, making the rounds to farmsteads, annually procured 3 million rabbits. They could procure more, but there is no place to process them. For the entire republic there are only two specialized mechanized centers equipped with lines for the slaughtering of 1,500 rabbits in 24 hours. Smaller-capacity lines are needed so that they may be installed in many rayons and large settlements.

The fate of rabbits raised in other regions in the country, for example, in Tataria, in Kurskaya Oblast and in the Urals, is also unenviable. Reports that these fluffy animals have long become "personas non grata" also arrive from there. The reason is the same everywhere--the shortage and low technical level of processing facilities. The statement by V. Fedosenko, chief of the subdivision of meat and dairy industry of the division of food industry of the USSR State Planning Committee, with whom we engaged in a conversation about machines for the processing of animals, seems strange, to say the least.

"What machines? What lines?" he was genuinely surprised. "All these are unreal problems. There are no rabbits."

How do you like that! Rabbits stand in line and undergo stiff competition to be processed, but the worker of the State Planning Committee does not see this.

"Of course, there are not quite enough rabbits," A. Ignatenko, deputy chief of the Main Administration of the USSR Ministry of Meat and Dairy Industry, also complains. "I have just returned from a trip to Bryanskaya Oblast. I saw lines for the processing of rabbits at five meat combines. They are idle--there is nothing to process."

Of course, if a fish canning plant is built where there is no fish, it will have no business. The same is with rabbits. Facilities for their processing should be placed on the basis of scientifically substantiated evaluations and the problems

of linkage and balance, in other words, problems of planned economic management, should be solved on the same basis. Perhaps, as a result of such confusion, the USSR Ministry of Machine Building for Light and Food Industry and Household Appliances does not at all manufacture lines for the processing of rabbits. Work based on primitive methods flourishes. The Ministry of Meat and Dairy Industry itself tries to invent and manufacture equipment and the Central Union of Consumer Cooperatives plans to organize a mass output of mobile units for the processing of these fur-bearing animals. To be sure, such an initiative deserves to be approved. However, there is a special machine building ministry, which has a specific base and expert personnel. As the saying goes, it's all up to it. Essentially, however, the Ministry of Machine Building for Light and Food Industry and Household Appliances withdrew from this important matter. Not only are rabbits not respected by machine builders. Many representatives of the feathered kingdom share the unenviable fate of the fluffy big-eared animals. Let us see what is being done here.

It is said that the name of the city of Kazan' is derived from the Tatar word "kaz," which in Russian means "goose." Whether this is so or not, the local population willingly keeps this fowl. The most varied dishes made from it can be found in the national kitchen. We were interested in finding out whether many geese were raised in Tataria. Unfortunately, fewer and fewer every year. Not a single kolkhoz or sovkhoz specializes in their production. A mass sale of young stock for private subsidiary farms has not yet been organized. There is also the following serious hindrance: The breeding of geese and other fowl is hampered by the lack of sufficient capacities and by the low technical level of equipment for the industrial processing of fowl.

Of course, chickens for meat and egg production have the leading position among the fowl stock raised in the country. Basically, they are concentrated at the enterprises of the Administration of Poultry Raising Industry. The powerful Yubileynaya Poultry Factory for 1 million laying hens has now begun to operate near Kazan'. New capacities are being put into operation in the suburban zones of Naberezhnyye Chelny, Al'met'yevsk and other industrial centers.

"However, from the very beginning even the newest enterprises are doomed to the output of nonstandard products," I. Zhuravlev, director of the trust, says. "The point is that the recently introduced GOST /All-Union State Standard/ provided for the delivery of completely eviscerated fowl to the trade network. But we don't have such lines. Not fully processed output will result in losses for us. Moreover, customers have long expected our enterprises to provide fowl well prepared for sale and, if needed, frozen and wrapped in modern packaging material."

Meat industry enterprises process a considerable part of the fowl. They receive all the feathered animals produced on kolkhozes, sovkhozes and private subsidiary farms. Operating lines for poultry processing are available only in Kazan', Bugul'ma, Chistopol' and Tetyushi. These are old facilities, where equipment is worn out and fairly obsolete. For example, let us take the poultry shop at the largest Kazan' meat combine. Steam baths, conveyer chains and take-ups--everything has one foot in the grave, as the saying goes. The industrial process often has to be stopped owing to breakdowns and nonstandard products are produced.

As local bodies expect, in the very near future the capacities for poultry processing at the meat industry enterprises of the autonomous republic should be at least doubled. In fact, however, a big growth is not yet observed. This is the third five-year plan during which a meat combine is supposed to be built in the city of Buinsk. However, even the plan does not envisage the construction of a shop to which feathered animals would be delivered from kolkhozes, sovkhozes and private subsidiary farms. Apparently, it is necessary to finally increase the output of special equipment, whose manufacture is entrusted to the USSR Ministry of Machine Building for Light and Food Industry and Household Appliances. It is not understandable why to this day machine builders deliver conveyers capable of producing "semieviscerated hens" exclusively. They deliver them to stores in bulk, drop them, crumple them and the hens lose their commodity appearance.

Let us recall the above-mentioned Kazan' goose. Its fate is even less enviable, because the situation with the technology for the processing of water fowl is even more complicated. In practice, such a poultry line at the Kazan' Meat Combine broke down, because it exceeded all the limits of wear and obsolescence. Sometimes there are great difficulties when the duck population arrives from the Atabayevskiy Specialized Poultry Sovkhoz. It is quite bad if turkeys are brought from the neighboring Komsomol'skiy Sovkhoz to the combine. They are processed with great difficulty on ordinary production lines. At the same time, lines are overloaded, equipment cracks and one-half of the operations have to be performed manually.

Special lines, also overally mechanized, but reinforced, are needed for the processing of turkeys, geese and other big and heavy fowl. Are they manufactured by our machine builders? We became interested in the assignments of the Poltava Meat Equipment Plant. There is no such paragraph in its plans. As yet other enterprises do not intend to engage in this matter.

Of course, such equipment should be highly productive, efficient and reliable. From these standpoints the bigger a facility, the more efficient it is. However, it is not rational to be carried away by a scale for the sake of a scale. The concentration of processing removes it from farms and from the producer. In Tataria processing centers can be counted on fingers. In some rayons there is nothing but trouble with fowl or rabbits. It is unprofitable to transport stock, because the loading of trucks is very small--only some 30 to 40 percent of freight capacity. Many animals are injured and die on the road. It is time to think about bringing processing facilities closer to places where fowl and small animals are raised and fattened. Perhaps they should be compact, even mobile units with freezing chambers, where two or three people could quickly and efficiently handle the entire set of operations and then promptly deliver output to the place of destination.

Ukrainian cooperative workers annually buy approximately 5 million head of fowl--chickens, geese and ducks--from the population. However, a mechanized slaughtering of fowl is organized only at two enterprises--in Ternopol' and Sumy--in the republic. Lines of a capacity of up to 5,000 head in 24 hours operate there. Again the same problem: Instead of organizing the processing of fowl locally, using small lines or units for this, only big facilities are established. Like rabbits, chickens, geese and ducks are forced to travel over many kilometers. The quality of output is lost and time and money are spent.

Last year the Poltava Meat Equipment Plant of the USSR Ministry of Machine Building for Light and Food Industry and Household Appliances owed 23 machines for fowl processing to the Ukrainian SSR Ministry of Meat and Dairy Industry. Owing to this, facilities at the Kirovograd Meat Combine and the Dolinsk and Kupyansk poultry combines were unequipped. The situation is even worse this year. The plant delivered only 12 out of 137 units of equipment for the processing of chickens. Moreover, the machines that are received are of a very low quality and often break down.

We were told the following in the USSR Ministry of Meat and Dairy Industry: The USSR Ministry of Machine Building for Light and Food Industry and Household Appliances does not at all manufacture equipment for the processing of rabbits and meets barely one-half of the "fowl" needs. Machine builders do not at all make lines for the evisceration of poultry. As a result, thousands of people are engaged in manual labor in this operation. Equipment for the meat and dairy industry makes up slightly more than 1 percent in the total volume of output of the Ministry of Machine Building for Light and Food Industry and Household Appliances. However, if the mechanisms for the processing of fowl and small animals are mentioned, this meager figure will be reduced manyfold. The enterprises of the USSR Ministry of Fruit and Vegetable Industry and other sectors engaged in the production of food products are also poorly provided with modern equipment.

Of course, this machine building ministry also has many problems. However, they cannot justify the shortage of the proper initiative and creative search. Probably, consumers have the right to expect greater responsibility, activity and business-like enterprise from the sector's staff. In the meantime over a period of many years, owing to the lack of the necessary machines and mechanisms for the processing of output, we have been losing many food products. This can no longer be tolerated.

11,439
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LIVESTOCK

FACTORS AFFECTING MILK LOSSES, REDUCTION IN QUALITY

Moscow KADRY SEL'SKOGO KHOZYAYSTVA in Russian No 2, Feb 82 pp 59-63

/Article by I. Fedorus, chief of the Administration for the Procurement of Raw Materials for Meat and Dairy Industry Enterprises: "Fight Against Losses Is the Daily Task of Personnel"/

/Text/ A successful realization of the food program requires a balanced development of the sectors forming the unified agroindustrial complex, significant strengthening of its material and technical base, refinement of economic relations among sectors and organization of their efficient interaction in an increase in the production of agricultural products and improvement in their preservation, transportation, processing and delivery to the consumer. These tasks are especially urgent in animal husbandry. Here, along with an increase in the production of meat, milk, wool and other products, it is necessary to improve the utilization of raw materials. Let us examine these problems, using milk resources as an example.

In our country much attention is paid to the development of dairy husbandry and to an increase in the production and improvement in the quality of dairy products. In the total volume of milk production we hold the first place in the world. In 1980 and 1981 the consumption of dairy products in terms of milk totaled 314 kg per man. Despite this comparatively high level, milk consumption still lags behind the norms recommended by the Institute of Nutrition of the USSR Academy of Medical Sciences.

During the 11th Five-Year Plan, as compared with the 10th Five-Year Plan, the average annual increase in milk production is to comprise 5 to 7 percent and the total volume is to be increased to 97 or 99 million tons annually, which will make it possible to draw considerably nearer to scientifically substantiated norms of consumption. However, this will happen only if the preservation of milk is ensured and if various milk losses occurring during storage, transportation and processing in the dairy industry are eliminated. At the present scale of production and consumption even small relative losses represent significant absolute values. For example, the losses of only 1 percent of the milk produced in the country amount to approximately 900,000 tons. This amount is sufficient to ensure consumption for more than 2 million people during the year.

Different factors have an effect on the preservation of milk. Those that prevent a deterioration in quality are the most important. It is well known that all the useful properties of milk can be lost completely if its production and storage are carried out under antisanitary conditions and if it has a high mechanical and bacterial contamination.

A number of measures directed toward an improvement in the quality of milk produced at sections have been implemented in the last few years. Among them an important place belongs to the operation of GOST /All-Union State Standard/ 13264-70 "Cow's Milk. Requirements During Procurement" and of the payment for purchased milk at prices depending on its grades. Their application made it possible to save thousands of tons of milk products.

During the 10th Five-Year Plan large-scale organizational work on an improvement in the quality of procured milk was carried out in many rayons by workers in agriculture, procurement, public health and the dairy industry in the Estonian SSR, the Latvian SSR, the Ukrainian SSR, the Belorussian SSR, the Moldavian SSR, Krasnodarskiy and Stavropol'skiy Krays and Moscow, Leningrad, Belgorodskaya, Voronezhskaya, Pskovskaya and a number of other oblasts in the Russian Federation. Managers and specialists paid principal attention to the creation of the necessary sanitary conditions at sections, improvement in the occupational skills of personnel, increase in the demands on and responsibility of all workers engaged in milk production, development of effective socialist competition among livestock breeders and intensification of the role of financial and moral incentives in the fight for the production of high-quality products. Here are some examples.

The Novyy Put' Kolkhoz and the Samarskiy Sovkhoz in Volzhskiy Rayon, Kuybyshevskaya Oblast, have about 4,000 cows. During the first 6 months of 1980 these farms sold milk with a low fat content to the state. As a result, its losses, as compared with the base, totaled 245 tons. The rayon state procurement inspectorate organized a careful check of the work of sections. It was established that managers and specialists of farms and sections did not manifest proper concern for this area of work and poorly controlled the fulfillment of production operations, on which a high quality of milk depended. The content of fat in milk was not determined regularly, there was no proper control of the work of livestock breeders, the feeding and keeping of animals were organized inefficiently and sanitary rules were grossly violated.

The state procurement inspectorate reported the check data to the bureau of the rayon committee of the CPSU. On its instruction a special commission headed by the secretary of the rayon party committee was dispatched to farms. It profoundly studied the state of affairs at livestock breeding sections. Measures for the elimination of hidden shortcomings were developed and daily control of the work of livestock breeders was established. The situation changed during the second 6 months. On the Samarskiy Sovkhoz milk losses were reduced by 139 tons and on the Novyy Put' Kolkhoz, by 38 tons.

At the end of the Ninth Five-Year Plan farms in Mironovskiy Rayon, Kiev Oblast, sold only 28 percent of first-grade milk to the state. Rayon agricultural and procurement bodies mapped out and implemented a number of important measures to improve its quality. Milk laboratories were organized at all sections. To control their operation and to render practical help, a mobile milk control laboratory was established in the rayon. It included workers of the rayon state procurement inspectorate, of the rayon agricultural equipment association, of the sanitary epidemiological station and of the dairy plant and zooveterinary specialists. A schedule of the departure of this laboratory for kolkhozes and sovkhozes, primarily those most lagging in milk quality, was prepared.

Controlling the sanitary conditions of sections, animals and milking equipment, the workers of the rayon laboratory provided on-the-spot practical help to farm workers in the proper organization of initial milk processing, in the technology of mechanical milking and in the implementation of other measures.

"Milk Quality Day" was established for all the rayon farms. Model centers for the retraining of laboratory workers were established at the base of the Kolkhoz imeni Voroshilov and of the Maslovskiy Sovkhoz-Tekhnikum. Regular classes began to be held with these workers. Wages taking into consideration quality work indicators were established for livestock breeders.

A special staff established at the rayon party committee now determines among kolkhozes and sovkhozes the winner in socialist competition for the highest indicators in the production and increase in the quality of milk. The winner farm is given the challenge Red Banner and the collective of an advanced section is awarded the prize named after Hero of Socialist Labor V. I. Batura--chairman of the Order of Lenin Kolkhoz imeni A. G. Buznitskiy--established by the rayon party committee. The title "Section With a High Production Standard" is conferred and a certificate is presented.

The rayon newspaper CHERVONA ZIRKA established a "Cup of Quality." At first it was awarded to the collective of the farm that, on the basis of quarterly results, obtained and sold the largest quantity of high-quality milk to the state. The "Cup of Quality" has now become common for the three rayons competing among themselves: Domodedovskiy Rayon in Moscow Oblast, Tartuskiy Rayon in the Estonian SSR and Mironovskiy Rayon in Kiev Oblast.

All these measures made it possible to greatly improve the quality of milk on all farms and, on the average, to increase the sale of first-grade milk to the state in the rayon to 96 percent. By the end of the 10th Five-Year Plan the content of fat in milk reached 3.63 percent, which was higher than the base level and 0.14 percent more than in 1976.

The improvement in the quality of milk greatly increased the proceeds from its sale to the state. For example, during the 10th Five-Year Plan only the Kolkhoz imeni Voroshilov, in addition, obtained almost 250,000 rubles. A total of 100,000 rubles out of this amount were paid to livestock breeders.

Rural workers in the Estonian SSR attained high indicators in the improvement in the quality of milk sold to the state. More than 93 percent of cooled first-grade milk and about 97 percent of the first group in purity and of first-category in bacterial seeding is received throughout this republic. During the five-year plan from the increased sale of first-grade milk the republic's farms, in addition, received 18.9 million rubles and of cooled first-grade milk, 22.7 million rubles.

Unfortunately, many farms still permit a gross violation of the sanitary rules pertaining to the maintenance of dairy sections, of the established procedure of cow milking, of the provision of cleanliness of utensils and of initial processing and storage of milk. For example, in the Lithuanian SSR a check disclosed cases of an unsatisfactory state of measuring and monitoring equipment, which created conditions for a nonobjective evaluation of the quality of milk. On some farms in Tauragskiy, Moletskiy and Pakruoyskiy Rayons milk was diluted with water. There were cases of an incorrect determination of the fat content and other quality indicators of milk during its dispatch to plants.

Often milk losses occur owing to the irresponsible attitude of some workers to the job entrusted to them, which results in violations of the conditions of production, initial processing, storage and transportation of milk. Although these losses are lowered annually, the fact that they persist cannot be tolerated. Milk can now be produced, initially processed, stored and transported everywhere in strict accordance with existing standards.

Big deficiencies in milk resources result from the decrease in the content of fat in milk. Throughout the country in 1970 the fat content of procured milk comprised 3.58 percent and in 1980 it was reduced to 3.52 percent, which was equivalent to an annual deficiency of 1,037,000 tons of milk worth about 290 million rubles.

The fat content of milk was reduced considerably on a number of farms in the RSFSR, the Ukrainian SSR, the Belorussian SSR and other republics. At the same time, it increased slightly in the Estonian SSR, now exceeding the base fat content considerably. In the republic during the 10th Five-Year Plan the content of fat in milk increased by 0.04 percent, which was equivalent to an increase of 95,200 tons in milk procurement. Kolkhozes and sovkhozes in the Latvian SSR and the Kirghiz SSR sell milk with a fat content higher than the base one to the state. Experience shows that, where breeding work aimed at an increase in the fat content and milk yield of the herd is carried out persistently and scientifically substantiated rations for the feeding of animals are prepared, the content of fat in milk increases.

The production of whole-milk substitutes used for the feeding of calves has increased in the last few years. According to calculations, the volumes of whole-milk substitutes now produced by the dairy industry should annually replace no less than 1.5 million tons of whole milk for food purposes. However, the actual reduction in the consumption of whole milk for the feeding of calves with whole-milk substitutes amounts to only 350,000 tons. As can be seen, farms, having organized a correct and zootechnically substantiated feeding of young stock, can increase the delivery of milk by 1,150,000 tons. The solution of this problem fully depends on the initiative and conscientious attitude of farm managers and specialists toward this matter.

Unfortunately, there are still many workers, who, relying on whole-milk substitutes, wastefully use whole milk for the feeding of calves. We believe that it is necessary to establish a procedure under which the farm that receives whole-milk substitutes from state resources would ensure a corresponding increase in the sale of whole milk, of course, provided it receives whole-milk substitutes meeting standard requirements.

We would also like to note some other channels of milk losses, which perhaps are not significant in volume, but are important from the point of view of improvement in the mechanism of management and increase in the responsibility of workers for the end result of the agroindustrial complex.

At present the quality indicators of milk are determined twice as a minimum: on the farm and at the dairy enterprise. According to calculations, about 68,000 tons of milk are annually used for analyses. We consider it advisable to establish nondepartmental laboratories equipped with automated instruments for the determination of the quality of milk. This will make it possible to reduce its consumption for analyses by approximately 40,000 to 50,000 tons annually and to ensure an objective evaluation, which should be obligatory both on the deliverer and the receiver.

Unsubstantiated losses are also caused by a 24-hour storage of milk samples taken from every batch delivered by farms. Such a procedure in case of possible checks is stipulated by the appropriate instruction of the USSR Ministry of Procurement. In practice, however, no more than 1 percent of the samples are used for repeated checks. At the same time, scientific investigations have demonstrated that after a 24-hour storage serious changes distoring initial indicators take place in milk. Samples are destroyed after 24 hours. Thus, every year about 11,000 tons of milk are hardly used. It seems that the inspectorates of the Ministry of Procurement can carry out their control at the time of transfer and acceptance of milk, which will be more objective and will not require a 24-hour storage of samples.

An expanded use of modern milk tank trucks and a switchover to a centralized delivery will contribute to the preservation of the quality of milk and reduction of its losses during transportation.

In accordance with the adopted decision on a gradual changeover to a direct acceptance of output on kolkhozes and sovkhozes and its centralized delivery by the special motor transport facilities of procurement officials large-scale work is done in the country. Public transport facilities and those of the State Committee for Supply of Production Equipment for Agriculture are widely used for these purposes in a number of republics (the Estonian SSR and the Latvian SSR).

A total of 11.9 million tons of milk, or more than 23 percent of its total delivery to the state, were accepted directly on farms and delivered throughout the country in 1981. The task of switching over to a centralized delivery of milk is most successfully solved in the Estonian SSR, where 72 percent of the milk from kolkhozes and sovkhozes was transported in such a way in 1981. In the Moldavian SSR the centralized delivery of milk comprised 54 percent, in the Tajik SSR, 50 percent and in the Belorussian SSR, 41 percent.

No less than 12.5 million tons of milk are to be transported from farms in a centralized way throughout the country in 1982.

The creation of the necessary material and technical provision is the main condition for an accelerated changeover to a centralized delivery of milk. Kolkhozes and sovkhozes need equipment for the cooling, storage and weighing of milk and their laboratories must be replenished with equipment and reagents for the determination of the quality of milk. There are also other conditions hampering a centralized delivery of output. Dairy industry enterprises need special motor transport facilities, capital investments for their purchase and the organization of a garage repair base, limits for fuels and lubricants and spare parts and additional labor limits.

Before 1980 the measures for a switchover to the acceptance of milk on farms and its centralized delivery were implemented at the expense of the material and technical resources of the Union republics. Beginning in 1981 specialized motor transport facilities and capital investments for an expansion of the centralized delivery of output from farms should be allocated by the USSR State Planning Committee. However, the necessary resources were not allocated for 1981 and 1982

There are also great potentials at dairy industry enterprises. There it is necessary to improve the organization of milk acceptance, to eliminate milk losses during transshipments and processing and to more widely introduce an improved technology of production of dairy products. Suffice it to say that milk losses resulting from the leak of paper packages alone now amount to almost 16,000 tons throughout the country.

The fight against milk losses is the job of all workers of sections, dairy industry enterprises and transport and trade organizations. Only with their harmonious and mutually coordinated joint work is it possible to close all the channels of irrevocably lost output. Thereby, the resources of milk used to meet the population's needs will be increased without any significant investments.

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PRIVATE PLOT DEVELOPMENT DISCUSSED

Kolkhoz, Sovkhoz Aid Needed

Moscow KORMOPROIZVODSTVO in Russian No 5, May 82 p 29

[Text] As recently as several years ago there was a country wide decrease in the number of privately owned livestock. In thousands of secondary farming operations owners discontinued their holdings of cattle, pigs and sheep. Is this supposed to mean that thousands of families no longer wanted meat and milk? Nothing of the sort! Only that these families, from supplementary producers of animal products, became mere consumers. This can be explained by many circumstances, both objective and subjective in nature. There is no need now to dwell on each one (this being subject matter for a separate discussion); however, it is necessary to say that not least among the reasons was the indifference of economic planners to people's needs. It was with much approval, therefore, that a decree issued by party and government on additional means for the development of private, secondary agriculture was met in the countryside.

The development of private, secondary agriculture is a most important task. This was discussed at the 23rd party congress. In his report to the CPSU Central Committee, Comrade L.I. Brezhnev stated: "Experience has shown that such farms can render significant support in the production of milk, meat and several other products. That which belongs to the worker--garden plots, truck gardens, poultry, livestock--is part of our general wealth."

On the Kalinin kolkhoz of Kirzhachskiy rayon, Vladimirskaya oblast, it has been understood for a long time that secondary farms are an important part of rural agriculture, tying together production and social-moral issues. Here it was 4 years ago that the program "Living in the country, have your own farm," was begun. And the results are still being felt. Many collective farm workers, especially younger ones, started up with cattle and pigs. When the farm yard began to empty, a considerable number of livestock were slaughtered for interfarm commerce. Now the scene is different. The collective farm workers supply themselves with fresh meat and milk. The surplus products are sold locally through the state procurement office in exchange for scarce goods.

The Kalinin kolkhoz is deeply involved with these private, secondary farms. Cattle owners have no problems with grazing for their animals. Collective farm workers are allotted hayfields and can order straw and fodder. In a

work, specific outlays are provided for agriculture. And is there a direct return on investment? There is, and it is significant. Livestock owners each year produce up to 100 tons of high grade hay on poorer lands. Several families each turned over to the kolkhoz 3 tons of this valuable feed. In addition, private farming instills in man zealousness, self-discipline, binds him closer to the and serves the interest of the state. So it turns out that the farming is private but the benefits are public.

To further develop and strengthen secondary farming, it is necessary--and this is supported in practice--to think out and work out a way to provide feed for animals and to find the correct organizational forms. Each individual kolkhoz and sovkhoz may have its own way of solving these problems. It is most important that they lead to the same end, private and public welfare. For example, on the Progress kolkhoz of Sumskaya oblast, beets are grown for feed on a contractual arrangement; this allows pension-age people to actively participate in increasing the production of feed. The article below tells of the benefits of such cooperation for private agriculture and for society.

Pensioners Raise Beets

Moscow KORMOPROIZVODSTVO in Russian No 5, May 82 pp 29-30

[Article by F.K. Drigaylo, agronomist, Krolevetskiy rayon, Sumskaya oblast]

[Text] At one of the joint meetings of the directorship and of the party bureau, where discussion centered on increasing the yield from each hectare, the director of the sovkhoz Porgress, V.A. Dzyuba, proposed a contractual agreement for the growing of beets. It would involve more than anyone else pensioners, many of whom could render specific aid to agriculture.

Agricultural economists worked out the agreement. By its terms the sovkhoz must plant the beets, take care of work between the rows, fertilize the crop, pay people for deepening and general care of the crop and in the fall, after harvest, give out at no charge 10 percent of the harvested beets.

An overwhelming majority of pensioners living in the village of Chervonyy Ranok willingly agreed to raise beets according to such an agreement. Following their example, work contracts with the sovkhoz were signed by office workers and other employees of village institutions and organizations, all together some 400 people. After sowing, the 80 hectare area was divided up into small plots; there was no standard plot, each taking as much as he or she could work. Pensioner F.P. Bruyaka, for example, asked for .20 hectare, office worker M.F. Lelyukh .35. Other workers received plots of about the same size.

Digging around the beets took 3 days. Everyone took part. Entire families went out into the field. Digging was done quickly and carefully to assure a proper depth of the plants. Productivity depends on it.

At the end of September the beet harvest began. And once again everyone went out into the field. In 5 days the roots were dug up, the fields cleared of

the beet leaves and given over to tractor operators for plowing. The beets were gathered in storage piles. More than 600 centners of beets were harvested from each of the 80 hectares; many plots had yields of from 800 to 850 centners per hectare. The total harvest was almost 5,000 tons. Ten percent of the crop was given over the the private farming sector, so that the sovkhoz still had 4,500 tons of beets for feed, twice as much from these same 80 hectares as in recent years. This represents a large increase to the fodder produced during the summer and fall.

We should remark that there were good harvests of other feed grains. The yield of corn was almost 400 centners per hectare. More than a ton of hay per cow was gathered, and there was large harvests of both coarse and succulent fodder.

Beets for fodder are especially important in milk production. When milk cows are moved into stalls, beets are introduced into their feed. They are also used to feed pigs.

In a word both the sovkhoz and individuals benefit. A final estimate shows that everyone who took part in this contractual agreement to grow beets received about 2 and 1/2 tons of feed for their own livestock.

When the scores were totalled up from the socialist competition among workers of the village, among the winners the name of war veteran and labor veteran, pensioner D.K. Kirichko, came up. Together with his wife, Olga Ivanovna, also a veteran of labor, Dmitry Karpovich harvested beets on .20 hectare according to his contract with the sovkhoz. He was the first to finish his harvesting and procured for the sovkhoz 156 centners of root plants. Ten percent of the total harvest, more than 1 and 1/2 tons of beets, as was stipulated in the agreement was given back free of charge to him. This is the necessary feed for his small livestock holding of 1 cow, 2 pigs and 30 hares.

"What sort of farm is it if there is no livestock, no poultry?" muses Dmitry Karpovich. "You can tell at a glance that no farmer lives there."

Pensioner C.A. Dyachok harvested 20 tons of beets on .25 hectare. She has a cow and 2 small pigs and sold to the sovkhoz a steer weighing more than 2 centners. Christina Aleksandrovna is quite happy: the 2 tons of beets received from the sovkhoz will be enough for her livestock through the entire winter.

Out of 580 households in Chervonyy Ranok, 400 have cattle. On an average each house has 2 small pigs, many have ducks, geese and hares. The workers of the village are able to produce enough milk and meat for themselves, the surplus being sold to the state. In 1980 for example, the state bought about 130 tons of milk and more than 30 tons of meat from private farmers. In the course of 11 months in 1981, M.G. Trigub sold almost a ton of milk, V.M. Buyvol more than 700kg, G.P. Dyachok, V.I. Ivchenko, T.G. Dyachok and others some 500 kg.

Concerned as it is with the development of private secondary farms, the sovkhoz has set aside pasture land for the livestock of individual farmers. All who sell milk to the state receive what they need in hay, and the sovkhoz sells at cost to laborers, office workers and pensioners straw, chaff and other feeds.

The rural worker is by nature an economist, so he quickly understood the benefits of such cooperation. The beets had hardly been harvested when on the sovkhoz director's desk lay piles of applications for the 1982 harvest. And among the first were those who last year refused to take part in the new arrangement. For sure we can say that the number of families who will have holdings of cattle and pigs shall increase.

Cooperation between secondary and state farms is a strong basis for increasing the output of agricultural products. The social aspect is just as important: the rational use of the labor force, especially those who, for one reason or another, are not involved in the production of goods. This cooperative arrangement involves them in increasing the production of food.

Progress in Belorussian Oblast

Moscow SEL'SKAYA ZHIZN' in Russian 26 May 82 p 2

[Article by A. Yanovich, deputy chairman of the Grodnenskiy soviet of the deputies, BSSR: "And What Can the Peasant Farm Do?"]

[Text] From year to year in villages and in rural areas of Grodnenskaya oblast there have been increasing crop yields, a strengthening of the material-technical support, an increase in the material well-being of kolkhozs and sovkhozs and an increase in the propserity of grain farmers and cattlemen. During the 10th Five-Year Plan alone, gross output of farm products in the oblast increased 16 percent.

Concerned with increasing productivity, party, soviet and rural organizations of the oblast are paying much attention to the development of private, secondary farms. Village residents of Grodnenskaya oblast are availing themselves of the opportunity to not only satisfy their demands but also to sell surplus produce to the state. They have 185,000 head of cattle, of which 143,000 are cows, more than 245,000 pigs and a lot of poultry; they also grow potatoes, vegetables and fodder on 70,000 hectares of arable land.

To see what the peasant farm can provide we shall take the Mostovskiy rayon as an example. Last year it sold to the state and to consumers' cooperatives almost 3,700 tons of milk, 650 tons of meat and almost 2,800 tons of potatoes. The specific share of products purchased by the state from individuals in the rayon amounted to between 10 percent and 14 percent.

Here the peasant farm is not becoming impoverished, but is growing richer. In 1981 alone the number of head of cattle privately owned in the rayon increased by 440, the number of pigs by 1,070.

And this has not happened by chance, but rather as a result of fulfilling specific plans. Let's look at the most important issues: the supply of animal feed and the sale of calves and piglets. For pasturage of their animals, farmers of Mostovskiy rayon have been allotted 2,500 hectares of improved and cultivated pasture, 1,684 hectares of hay fields for long-term use, for growing fodder an additional 435 hectares of ploughed fields.

Very important is the initiative provided by the farm directors. For example, on the Mostovskiy sovkhoz very few sows have ever been kept; piglets were bought. The directorship of the sovkhoz has undertaken several measures to change this. To those peasants wishing to have sows, an additional .10 hectare is allotted and 2 centners of grain forage are sold. These changes in 1 year allowed the number of privately owned sows to increase from 30 to 80, the price of piglets to decrease at the market and the state purchases of pork from individuals to double.

Cooperation between individuals and kolkhozs in the growing of fodder and feeding of pigs has increased with benefits to both parties. The kolkhoz Shara of this rayon gave to collective farm workers about 300 piglets to raise, each weighing about 15 kg. An additional .05 hectare of ploughed field per head was set aside for fodder production, and grain forage is being sold at cost. According to the contract, the peasant farm will fatten up the pigs up unto 100 kg of weight and will sell them to the collective enterprise at pre-determined prices.

The development of private, secondary farms is being constantly monitored by local and village soviets of people's deputies. Households in villages and in industrial settlements have been surveyed, kolkhoz and sovkhoz directorates have contracted with every peasant household for the purchase of surplus products and at meetings, villagers have become familiar with arrangements for fodder supply.

This type of work is being carried out in all other rayons. In 1981 in the oblast this enabled the state to purchase from private farms, 1,038,000 tons of milk, or 730 kg from each cow. The state and consumer cooperatives purchased from private farms 223,000 tons of pork and fowl. And it is necessary to take into account that much surplus produce was sold at farmers' markets and that many pigs were bought on contract from individuals by kolkhozs and sovkhozs for subsequent feeding and raising.

But still there is a large surplus. Take milk for example. In the Baranovichskiy, Vasilevskiy and Ginovichskiy rural soviets last year, the state purchased from 1,350 to 1,500 kg of milk per cow, and in 1 out of 4 rural soviets of the oblast upwards of 900 kg. We are trying to attain high qualitative indices all over.

Much is being done in that direction right now. In spite of unfavorable weather conditions the past few years, and this is particularly reflected in the production of feed, kolkhozs and sovkhozs have allotted, according to contractual obligations for the selling and distribution of products, 41,000 tons of grain, 17,000 tons of root crops, 114,000 tons of hay, 78,000 tons of straw and have sold 57,000 tons of mixed fodder in return for requisitioned products.

Much help is given especially to invalids and pensioners in labor-intensive activities on their plots. To increase their productivity, almost 127,000 of their plots have been transferred to fields where there is crop rotation. Everywhere state agricultural enterprises are helping them procure seed for potatoes, planting it, working the soil and then harvesting the crop. Rayon consumer service establishments and agricultural equipment associations organize centers offering such services to those living in villages and industrial settlements.

Kolkhozs and sovkhozs provide incentive for the sale of surplus products by providing additional allotments of fodder. The number of piglets and calves sold has also increased.

All these efforts have helped overcome the marked tendency in recent times not to have holdings of livestock. Thus in 1981 the number of head of steers individually owned increased by 8,000, cows by 900, pigs by 18,000, sheep by 3,600. For every 100 families of state farm and collective farm workers in the oblast there are 89 head of cattle, out of which there are 69 cows, and also 112 pigs and a large number of fowl.

It is not only important to create conditions leading to privately produced surpluses but also to facilitate purchases, to free people from the worries and the waste of time involved. We have assigned purchasing agents for animals and for milk; their payment is directly related to the final product. Agencies of procurement and of agricultural product inspection of the rayon and oblast control prices and ensure correct bureaucratic procedures.

And one more fact. It has become a common practice in our oblast that in each rayon there is a special commission of the oblast party committee and of the oblast soviet of people's deputies which hears issues concerning organizational and technical undertakings to facilitate plan fulfillment and social obligations. Such a commission met early this year. Questions dealing not only with the development of state but also of private, secondary farms were looked at closely as well as their contribution to increasing the production of grain and animal products. Such issues were also considered by a commission of the rayon party committee and of the rayon soviet of people's deputies in rural soviets and agricultural enterprises; the same detailed analysis was applied to each kolkhoz, sovkhoz and production sub-unit. The results of such work we can consider to be the following: from individual farms more than 117,000 head of cattle, 97,200 pigs and 106,000 tons of milk have been contracted for.

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